

Utilities Services of South Carolina, Inc.  
Docket No. 2007-286-W/S

BEFORE THE  
PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

EXHIBITS  
TO ACCOMPANY THE  
PREPARED DIRECT TESTIMONY  
OF  
PAULINE M. AHERN, CRRA  
PRINCIPAL  
AUS CONSULTANTS

ON BEHALF OF  
UTILITIES SERVICES OF SOUTH CAROLINA, INC.

NOVEMBER 2007

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Utilities Services of South Carolina, Inc.  
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to the Supporting Schedules  
of Pauline M. Ahern

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Utilities Services of South Carolina, Inc.  
Summary of Cost of Capital and Fair Rate of Return  
Based on the Actual Consolidated Capital Structure of Utilities, Inc. at December 31, 2006

<u>Type of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>	
Total Debt	59.83%	6.60%	3.84%	3.84%
Common Equity	40.17%	11.40% - 12.00% (2)	4.58%	4.82%
Total	<u>100.00%</u>		<u>8.42%</u>	- <u>8.66%</u>

- (1) From Exhibit B, Page 5 of the Application of Utilities Services of South Carolina, Inc.. for adjustment of rates and charges for the provision of water and sewer service and modification of rate schedules.
- (2) Based upon informed judgment from the entire study, the principal results of which are summarized on page 2 of this Schedule.

Utilities Services of South Carolina, Inc.  
Brief Summary of Common Equity Cost Rate

No.	Principal Methods	Proxy Group of Eight AUS Utility Reports Water Companies		Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.8 %		10.1 %
2.	Risk Premium Model (RPM) (2)	10.8		11.0
3.	Capital Asset Pricing Model (CAPM) (3)	10.2		10.5
4.	Comparable Earnings Model (CEM) (4)	14.3		14.2
5.	Indicated Range of Common Equity Cost Rate before Adjustment for Business Risk	10.80 %	--	11.40 %
6.	Business Risk Adjustment (5)	<u>0.30</u>		<u>0.30</u>
7.	Indicated Range of Common Equity Cost Rate after Adjustment for Business Risk	11.10 %	--	11.70 %
8.	Financial Risk Adjustment (6)	<u>0.30</u>		<u>0.30</u>
9.	Recommended Range of Common Equity Cost Rate after Adjustment for Business and Financial Risk	<u>11.40 %</u>	--	<u>12.00 %</u>

- Notes: (1) From Schedule PMA-5 of this Exhibit.  
(2) From page 1 of Schedule PMA-10 of this Exhibit.  
(3) From page 1 Schedule PMA-11 of this Exhibit.  
(4) From pages 2 and 5 of Schedule PMA-12 of this Exhibit.  
(5) Business risk adjustment to reflect Utilities Services of South Carolina, Inc.'s greater business risk due to its small size relative to each proxy group as detailed in Ms. Ahern's accompanying direct testimony.  
(6) Financial risk adjustment to reflect Utilities Services of South Carolina, Inc.'s greater financial risk relative to each proxy group as detailed in Ms. Ahern's accompanying direct

Utilities Services of South Carolina, Inc.  
Derivation of Investment Risk Adjustment Based upon  
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		<u>1</u>		<u>2</u>		<u>3</u>	<u>4</u>	<u>5</u>
		Total Capitalization (incl. Short-Term Debt) for the Year 2006		Market Capitalization on July 10, 2007 (1)		Applicable Decile of the NYSE/AMEX/NASDAQ	Applicable Size Premium	Spread from Applicable Size Premium (2)
		( millions )	(times larger)	( millions )	(times larger)			
1.	<u>Utilities Services of South Carolina, Inc.</u>	\$ 6.591	(3)					
A.	<u>Based upon the Proxy Group of Eight AUS Utility Reports Water Companies</u>			\$ 14.988		10 (4)	6.27% (5)	
B.	<u>Based upon the Proxy Group of Four Value Line (Standard Edition) Water Companies</u>			\$ 15.074		10 (4)	6.27% (5)	
2.	<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>	\$ 555.480	(6)	84.3 x	\$ 710.535 47.4 x	8 - 9 (7)	2.49% (8)	3.78%
3.	<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>	\$ 898.745	(9)	136.4	\$ 1,158.741 76.9	7 (10)	1.62% (11)	4.65%

Decile	Number of Companies	Recent Total Market Capitalization (10) ( millions )	Recent Average Market ( millions )
1 - Largest	168	\$9,586,846.750	\$57,064.564
2	179	2,148,609.950	12,003.408
3	198	1,126,434.240	5,689.062
4	184	624,621.080	3,394.680
5	209	492,840.110	2,358.087
6	264	428,711.640	1,623.908
7	291	333,661.890	1,146.604
8	355	284,415.720	801.171
9	660	298,400.730	452.122
10 - Smallest	1744	229,218.310	131.433

See page 4 for notes.

Utilities Services of South Carolina, Inc.  
Derivation of Investment Risk Adjustment Based upon  
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE

Notes:

- (1) From page 5 of this Schedule.
- (2) Line No. 1 -- Line No. 2 and Line No. 1 -- Line No. 3 of Columns 3 and 4, respectively. For example, the 3.78% in Column 5, Line No. 2 is derived as follows  $3.78\% \div 6.27\% = 2.49\%$ .
- (3) Company provided.
- (4) With an estimated market capitalization of \$14.988 million (based upon the proxy group of eight AUS Utility Reports water companies) and \$15.074 million (based upon the proxy group of four Value Line (Standard Edition) water companies), Utilities Services of South Carolina, Inc. falls in the 10<sup>th</sup> decile of the NYSE/AMEX/NASDAQ which has an average market capitalization of \$131.433 as shown in the table on the bottom half of page 3 of this Schedule.
- (5) Size premium applicable to the 10<sup>th</sup> decile of the NYSE/AMEX/NASDAQ as shown on page 15 of this Schedule.
- (6) From page 1 of Schedule PMA-3.
- (7) With an estimated market capitalization of \$710.535million, the proxy group of eight AUS Utility Reports water companies falls between the 8<sup>th</sup> and 9<sup>th</sup> deciles of the NYSE/AMEX/NASDAQ which have an average market capitalization of \$626.647 million as can be gleaned from the information shown in the table on the bottom half of page 3 of this Schedule.
- (8) Average size premium applicable to the 8<sup>th</sup> and 9<sup>th</sup> deciles of the NYSE/AMEX/NASDAQ as can be gleaned from the information shown on page 15 of this Schedule.
- (9) From page 1 of Schedule PMA-4.
- (10) With an estimated market capitalization of \$1,158.741 million, the proxy group of four Value Line (Standard Edition) water companies falls in the 7<sup>th</sup> decile of the NYSE/AMEX/NASDAQ which has an average market capitalization of \$1,146.604 million as shown in the table on the bottom half of page 3 of this Schedule.
- (11) Size premium applicable to the 7<sup>th</sup> decile of the NYSE/AMEX/NASDAQ as shown on page 15 of this Schedule.

Utilities Services of South Carolina, Inc.  
Market Capitalization of Utilities Services of South Carolina, Inc.  
the Proxy Group of Eight AUS Utility Reports Water Companies and the  
the Proxy Group of Four Value Line (Standard Edition) Water Companies.

Company	1	2	3	4	5	6
	Common Stock Shares Outstanding at March 31, 2007 ( millions )	Book Value per Share at March 31, 2007 (1)	Total Common Equity at March 31, 2007 ( millions )	Closing Stock Market Price on July 10, 2007	Market-to-Book Ratio at July 10, 2007 (2)	Market Capitalization on July 10, 2007 (3) ( millions )
<u>Utilities Services of South Carolina, Inc.</u>	NA (4)	NA	\$ 6,591 (4)	NA	227.4 % (5)	\$ 14,988 (6)
Based upon the Proxy Group of Eight AUS Utility Reports Water Companies						
Based upon the Proxy Group of Four Value Line (Standard Edition) Water Companies					228.7 % (7)	\$ 15,074 (8)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>						
American States Water Co.	17,055	\$ 16,847	\$ 287,319	\$ 35,260	209.3 %	\$ 601,359
Aqua America, Inc.	133,261	6,965	928,164	22,280	319.9	2,969,055
Artesian Resources Corp.	6,273	14,659	91,958	19,200	131.0	120,442
California Water Service Group	20,659	18,100	373,930	36,690	202.7	757,979
Connecticut Water Service Inc.	8,304	11,928	99,049	24,580	206.1	204,112
Middlesex Water Company	13,168	9,806	129,121	18,860	192.3	248,348
SJW Corp.	18,312	12,435	227,707	31,970	257.1	585,435
York Water Company	11,218	5,854	65,672	17,610	300.8	197,549
Average	28,531	\$ 12,074	\$ 275,365	\$ 25,806	227.4 %	\$ 710,535
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>						
American States Water Co.	17,055	\$ 16,847	\$ 287,319	\$ 35,260	209.3 %	\$ 601,359
Aqua America, Inc.	133,261	6,965	928,164	22,280	319.9	2,969,055
California Water Service Group	20,659	18,100	373,930	36,690	202.7	757,979
Southwest Water Company	24,026	6,977	167,641	12,760	182.9	306,572
	48,750	\$ 12,222	\$ 439,264	\$ 26,748	228.7 %	\$ 1,158,741

NA = Not Available

- Notes:
- (1) Column 3 / Column 1.
  - (2) Column 4 / Column 2.
  - (3) Column 5 \* Column 3.
  - (4) Company-provided at June 30, 2007
  - (5) The market-to-book ratio of Utilities Services of South Carolina, Inc. at July 10, 2007 is assumed to be equal to the average market-to-book ratio at July 10, 2007 of the proxy group of eight AUS Utility Reports water companies.
  - (6) Utilities Services of South Carolina, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at July 10, 2007 of the proxy group of eight AUS Utility Reports water companies, 227.4%, and Utilities Services of South Carolina, Inc.'s market capitalization at July 10, 2007 would therefore have been \$14,988 million. (\$14,988 = \$6,591 \* 227.4%).
  - (7) The market-to-book ratio of Utilities Services of South Carolina, Inc. at July 10, 2007 is assumed to be equal to the average market-to-book ratio at July 10, 2007 of the proxy group of four Value Line (Standard Edition) water companies.
  - (8) Utilities Services of South Carolina, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at July 10, 2007 of the proxy group of four Value Line (Standard Edition) water companies, 228.7%, and Utilities Services of South Carolina, Inc.'s market capitalization at July 10, 2007 would therefore have been \$15,074 million. (\$15,074 = \$6,591 \* 228.7%).

Source of Information: Standard & Poor's Compustat Services, Inc. Research Insight PCPlus Data Base  
finance.yahoo.com

Stocks, Bonds, Bills,  
and Inflation

Market Results for  
1926–2006

**2007 Yearbook**  
Valuation Edition





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## Chapter 7

### Firm Size and Return

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#### The Firm Size Phenomenon

One of the most remarkable discoveries of modern finance is that of a relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones. Many studies have looked at the effect of firm size on return.<sup>1</sup> In this chapter, the returns across the entire range of firm size are examined.

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#### Construction of the Decile Portfolios

The portfolios used in this chapter are those created by the Center for Research in Security Prices (CRSP) at the University of Chicago's Graduate School of Business. CRSP has refined the methodology of creating size-based portfolios and has applied this methodology to the entire universe of NYSE/AMEX/NASDAQ-listed securities going back to 1926.

The New York Stock Exchange universe excludes closed-end mutual funds, preferred stocks, real estate investment trusts, foreign stocks, American Depositary Receipts, unit investment trusts, and Americus Trusts. All companies on the NYSE are ranked by the combined market capitalization of their eligible equity securities. The companies are then split into 10 equally populated groups, or deciles. Eligible companies traded on the American Stock Exchange (AMEX) and the Nasdaq National Market (NASDAQ) are then assigned to the appropriate deciles according to their capitalization in relation to the NYSE breakpoints. The portfolios are rebalanced, using closing prices for the last trading day of March, June, September, and December. Securities added during the quarter are assigned to the appropriate portfolio when two consecutive month-end prices are available. If the final NYSE price of a security that becomes delisted is a month-end price, then that month's return is included in the quarterly return of the security's portfolio. When a month-end NYSE price is missing, the month-end value of the security is derived from merger terms, quotations on regional exchanges, and other sources. If a month-end value still is not determined, the last available daily price is used.

Base security returns are monthly holding period returns. All distributions are added to the month-end prices, and appropriate price adjustments are made to account for stock splits and dividends. The return on a portfolio for one month is calculated as the weighted average of the returns for its individual stocks. Annual portfolio returns are calculated by compounding the monthly portfolio returns.

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#### Size of the Deciles

Table 7-1 reveals that the top three deciles of the NYSE/AMEX/NASDAQ account for most of the total market value of its stocks. Nearly two-thirds of the market value is represented by the first decile, which currently consists of 168 stocks, while the smallest decile accounts for just over one percent of the

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<sup>1</sup> Rolf W. Banz was the first to document this phenomenon. See Banz, Rolf W. "The Relationship Between Returns and Market Value of Common Stocks," *Journal of Financial Economics*, Vol. 9, 1981, pp. 3-18.

market value. The data in the second column of Table 7-1 are averages across all 81 years. Of course, the proportion of market value represented by the various deciles varies from year to year.

Columns three and four give recent figures on the number of companies and their market capitalization, presenting a snapshot of the structure of the deciles near the end of 2006.

Table 7-1  
**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Size and Composition,**  
1926 through September 30, 2006

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Recent Percentage of Total Capitalization
1-largest	63.26%	168	\$9,586,846,750	61.64%
2	13.97%	179	2,148,609,950	13.81%
3	7.57%	198	1,126,434,240	7.24%
4	4.73%	184	624,621,080	4.02%
5	3.24%	209	492,840,110	3.17%
6	2.38%	264	428,711,640	2.76%
7	1.74%	291	333,661,890	2.15%
8	1.29%	355	284,415,720	1.83%
9	1.00%	660	298,400,730	1.92%
10-Smallest	0.82%	1,744	229,218,310	1.47%
Mid-Cap 3-5	15.54%	591	2,243,894,380	15.41%
Low-Cap 6-8	5.41%	910	1,046,789,110	7.19%
Micro-Cap 9-10	1.83%	2,404	527,619,100	3.62%

Source: © 200703 CRSP® Center for Research in Security Prices, Graduate School of Business, The University of Chicago.  
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Historical average percentage of total capitalization shows the average, over the last 81 years, of the decile market values as a percentage of the total NYSE/AMEX/NASDAQ calculated each month. Number of companies in deciles, recent market capitalization of deciles, and recent percentage of total capitalization are as of September 30, 2006.

Table 7-2 gives the current breakpoints that define the composition of the NYSE/AMEX/NASDAQ size deciles. The largest company and its market capitalization are presented for each decile. Table 7-3 shows the historical breakpoints for each of the three size groupings presented throughout this chapter. Mid-cap stocks are defined here as the aggregate of deciles 3–5. Based on the most recent data (Table 7-2), companies within this mid-cap range have market capitalizations at or below \$7,777,183,000 but greater than \$1,946,588,000. Low-cap stocks include deciles 6–8 and currently include all companies in the NYSE/AMEX/NASDAQ with market capitalizations at or below \$1,946,588,000 but greater than \$626,955,000. Micro-cap stocks include deciles 9–10 and include companies with market capitalizations at or below \$626,955,000. The market capitalization of the smallest company included in the micro-capitalization group is currently \$2,247,000.

Table 7-2  
**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, Largest Company  
and Its Market Capitalization by Decile**  
September 30, 2006

Decile	Market Capitalization of Largest Company (in thousands)	Company Name
1-Largest	\$371,187,368	Exxon Mobil Corp.
2	16,820,566	EOG Resources Inc
3	7,777,183	Xcel Energy Inc.
4	4,085,184	First American Corp./CA
5	2,848,771	Scotts Miracle Gro Co.
6	1,946,588	DRS Technologies Inc.
7	1,378,476	ESCO Technologies Inc
8	976,624	Knoll Inc
9	626,955	Bandag Inc
10-Smallest	314,433	M & F Worldwide Corp.

Source: Center for Research in Security Prices, University of Chicago

#### Presentation of the Decile Data

Summary statistics of annual returns of the 10 deciles over 1926–2006 are presented in Table 7-4. Note from this exhibit that both the average return and the total risk, or standard deviation of annual returns, tend to increase as one moves from the largest decile to the smallest. Furthermore, the serial correlations of returns are near zero for all but the smallest two deciles. Serial correlations and their significance will be discussed in detail later in this chapter.

Graph 7-1 depicts the growth of one dollar invested in each of three NYSE/AMEX/NASDAQ groups broken down into mid-cap, low-cap, and micro-cap stocks. The index value of the entire NYSE/AMEX/NASDAQ is also included. All returns presented are value-weighted based on the market capitalizations of the deciles contained in each subgroup. The sheer magnitude of the size effect in some years is noteworthy. While the largest stocks actually declined 9 percent in 1977, the smallest stocks rose more than 20 percent. A more extreme case occurred in the depression-recovery year of 1933, when the difference between the first and tenth decile returns was far more substantial, with the largest stocks rising 46 percent, and the smallest stocks rising 224 percent. This divergence in the performance of small and large company stocks is a common occurrence.

Table 7-3  
**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ**  
Largest and Smallest Company by Size Group

from 1926 to 1965

Date (Sept 30)	Capitalization of Largest Company (in thousands)			Capitalization of Smallest Company (in thousands)		
	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10
1926	\$61,490	\$13,835	\$4,263	\$13,860	\$4,278	\$43
1927	\$65,078	\$14,522	\$4,450	\$14,664	\$4,496	\$65
1928	\$81,095	\$18,788	\$5,119	\$18,801	\$5,170	\$135
1929	\$103,054	\$24,300	\$5,850	\$24,328	\$5,862	\$118
1930	\$66,750	\$12,918	\$3,356	\$13,050	\$3,359	\$30
1931	\$43,120	\$8,142	\$1,944	\$8,222	\$1,946	\$15
1932	\$12,567	\$2,208	\$468	\$2,223	\$469	\$19
1933	\$40,298	\$7,280	\$1,875	\$7,346	\$1,892	\$120
1934	\$38,019	\$6,638	\$1,691	\$6,669	\$1,722	\$69
1935	\$37,631	\$6,549	\$1,350	\$6,605	\$1,383	\$38
1936	\$46,980	\$11,526	\$2,800	\$11,563	\$2,801	\$98
1937	\$51,750	\$13,635	\$3,563	\$13,793	\$3,600	\$68
1938	\$36,102	\$8,372	\$2,195	\$8,400	\$2,200	\$60
1939	\$35,409	\$7,478	\$1,854	\$7,500	\$1,860	\$75
1940	\$30,930	\$8,007	\$1,872	\$8,130	\$1,929	\$51
1941	\$31,398	\$8,336	\$2,087	\$8,357	\$2,100	\$72
1942	\$26,037	\$6,870	\$1,779	\$6,875	\$1,788	\$82
1943	\$42,721	\$11,403	\$3,847	\$11,475	\$3,903	\$395
1944	\$46,221	\$13,066	\$4,812	\$13,068	\$4,820	\$309
1945	\$55,268	\$17,575	\$6,428	\$17,584	\$6,466	\$225
1946	\$77,784	\$24,192	\$10,149	\$24,199	\$10,168	\$829
1947	\$57,942	\$17,735	\$6,380	\$17,872	\$6,410	\$747
1948	\$67,238	\$19,632	\$7,329	\$19,651	\$7,348	\$784
1949	\$56,082	\$14,549	\$5,108	\$14,577	\$5,112	\$379
1950	\$66,143	\$18,675	\$6,225	\$18,700	\$6,243	\$303
1951	\$82,517	\$22,750	\$7,598	\$22,860	\$7,600	\$668
1952	\$97,936	\$25,452	\$8,480	\$25,532	\$8,551	\$480
1953	\$98,595	\$25,374	\$8,168	\$25,395	\$8,177	\$459
1954	\$125,834	\$29,707	\$8,488	\$29,791	\$8,502	\$463
1955	\$170,829	\$41,681	\$12,444	\$41,861	\$12,524	\$553
1956	\$183,792	\$46,886	\$13,623	\$47,103	\$13,659	\$1,122
1957	\$194,300	\$47,658	\$13,848	\$48,509	\$13,950	\$925
1958	\$195,536	\$46,774	\$13,816	\$46,871	\$14,015	\$550
1959	\$256,283	\$64,110	\$19,548	\$64,221	\$19,701	\$1,804
1960	\$252,292	\$61,529	\$19,344	\$61,596	\$19,385	\$831
1961	\$301,464	\$77,996	\$23,562	\$78,976	\$23,613	\$2,455
1962	\$250,786	\$58,785	\$18,744	\$58,866	\$18,952	\$1,018
1963	\$308,903	\$71,846	\$23,927	\$71,971	\$24,056	\$296
1964	\$349,675	\$79,508	\$25,595	\$79,937	\$25,607	\$223
1965	\$365,675	\$84,600	\$28,483	\$85,065	\$28,543	\$250

Source: Center for Research in Security Prices, University of Chicago.

Firm Size and Return

Table 7-3 (continued)  
**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ**  
Largest and Smallest Company by Size Group

from 1966 to 2006

Date (Sept 30)	Capitalization of Largest Company (in thousands)			Capitalization of Smallest Company (in thousands)		
	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10
1966	\$403,137	\$99,960	\$34,884	\$100,107	\$34,966	\$381
1967	\$459,438	\$118,988	\$42,188	\$119,635	\$42,237	\$381
1968	\$531,306	\$150,893	\$60,543	\$151,260	\$60,719	\$592
1969	\$518,485	\$146,792	\$54,353	\$147,311	\$54,503	\$2,119
1970	\$382,884	\$94,754	\$29,916	\$94,845	\$29,932	\$822
1971	\$551,690	\$147,426	\$45,570	\$147,810	\$45,571	\$865
1972	\$557,181	\$143,835	\$46,728	\$144,263	\$46,757	\$1,031
1973	\$431,354	\$96,699	\$29,352	\$96,710	\$29,430	\$561
1974	\$356,876	\$79,878	\$23,355	\$80,280	\$23,400	\$444
1975	\$477,054	\$102,313	\$30,353	\$103,283	\$30,394	\$540
1976	\$566,296	\$121,717	\$34,864	\$121,992	\$34,901	\$564
1977	\$584,577	\$139,196	\$40,700	\$139,620	\$40,765	\$513
1978	\$580,881	\$164,093	\$47,927	\$164,455	\$48,038	\$830
1979	\$665,019	\$177,378	\$51,197	\$177,769	\$51,274	\$948
1980	\$762,195	\$199,312	\$50,496	\$199,315	\$50,544	\$549
1981	\$962,397	\$264,690	\$72,104	\$264,783	\$72,450	\$1,446
1982	\$770,517	\$210,301	\$55,336	\$210,630	\$55,423	\$1,060
1983	\$1,209,911	\$353,889	\$104,382	\$356,238	\$104,588	\$2,025
1984	\$1,075,436	\$315,965	\$91,004	\$316,103	\$91,195	\$2,093
1985	\$1,440,436	\$370,224	\$94,875	\$370,729	\$94,887	\$760
1986	\$1,857,621	\$449,015	\$110,617	\$449,462	\$110,953	\$706
1987	\$2,059,143	\$468,948	\$113,419	\$470,662	\$113,430	\$1,277
1988	\$1,957,926	\$421,340	\$94,449	\$421,675	\$94,573	\$696
1989	\$2,145,947	\$480,975	\$100,285	\$483,623	\$100,384	\$96
1990	\$2,171,217	\$474,065	\$93,750	\$474,477	\$93,790	\$132
1991	\$2,129,863	\$457,958	\$87,586	\$458,853	\$87,733	\$278
1992	\$2,428,671	\$500,327	\$103,352	\$500,346	\$103,500	\$510
1993	\$2,705,192	\$603,588	\$137,105	\$607,449	\$137,137	\$602
1994	\$2,470,244	\$596,059	\$148,104	\$597,975	\$148,216	\$598
1995	\$2,789,938	\$647,210	\$155,386	\$647,253	\$155,532	\$89
1996	\$3,142,657	\$751,316	\$193,001	\$751,680	\$193,016	\$1,043
1997	\$3,484,440	\$813,923	\$228,900	\$814,355	\$229,058	\$585
1998	\$4,216,707	\$925,688	\$252,553	\$926,215	\$253,031	\$1,671
1999	\$4,251,741	\$875,309	\$220,397	\$875,582	\$220,456	\$1,502
2000	\$4,143,302	\$840,080	\$192,083	\$840,730	\$192,439	\$1,393
2001	\$5,156,315	\$1,108,224	\$265,734	\$1,108,969	\$265,736	\$443
2002	\$4,930,326	\$1,116,525	\$308,980	\$1,124,331	\$309,245	\$501
2003	\$4,744,580	\$1,163,369	\$329,060	\$1,163,423	\$329,529	\$332
2004	\$6,241,953	\$1,607,854	\$505,437	\$1,607,931	\$506,410	\$1,393
2005	\$7,187,244	\$1,728,888	\$586,393	\$1,729,364	\$587,243	\$1,079
2006	\$7,777,183	\$1,946,588	\$626,955	\$1,947,240	\$627,017	\$2,247

Source: Center for Research in Security Prices, University of Chicago.

Table 7-4  
**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, Summary Statistics of Annual Returns 1926–2006**

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
1-Largest	9.6	11.3	19.06	0.09
2	11.0	13.3	21.72	0.03
3	11.3	13.8	23.51	-0.02
4	11.3	14.3	25.78	-0.02
5	11.7	14.9	26.61	-0.02
6	11.8	15.3	27.67	0.04
7	11.7	15.6	29.80	0.01
8	11.9	16.6	33.27	0.04
9	12.1	17.5	36.31	0.05
10-Smallest	14.0	21.6	45.16	0.15
Mid-Cap, 3–5	11.4	14.2	24.59	-0.02
Low-Cap, 6–8	11.8	15.7	29.34	0.03
Micro-Cap, 9–10	12.8	18.8	38.92	0.08
NYSE/AMEX/NASDAQ	10.1	12.1	20.08	0.03
Total Value-Weighted Index				

Source: Center for Research in Security Prices, University of Chicago

### Aspects of the Firm Size Effect

The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have had returns in excess of those implied by their betas.

Second, the calendar annual return differences between small and large companies are serially correlated. This suggests that past annual returns may be of some value in predicting future annual returns. Such serial correlation, or autocorrelation, is practically unknown in the market for large stocks and in most other equity markets but is evident in the size premia.

Third, the firm size effect is seasonal. For example, small company stocks outperformed large company stocks in the month of January in a large majority of the years. Such predictability is surprising and suspicious in light of modern capital market theory. These three aspects of the firm size effect—long-term returns in excess of systematic risk, serial correlation, and seasonality—will be analyzed thoroughly in the following sections.

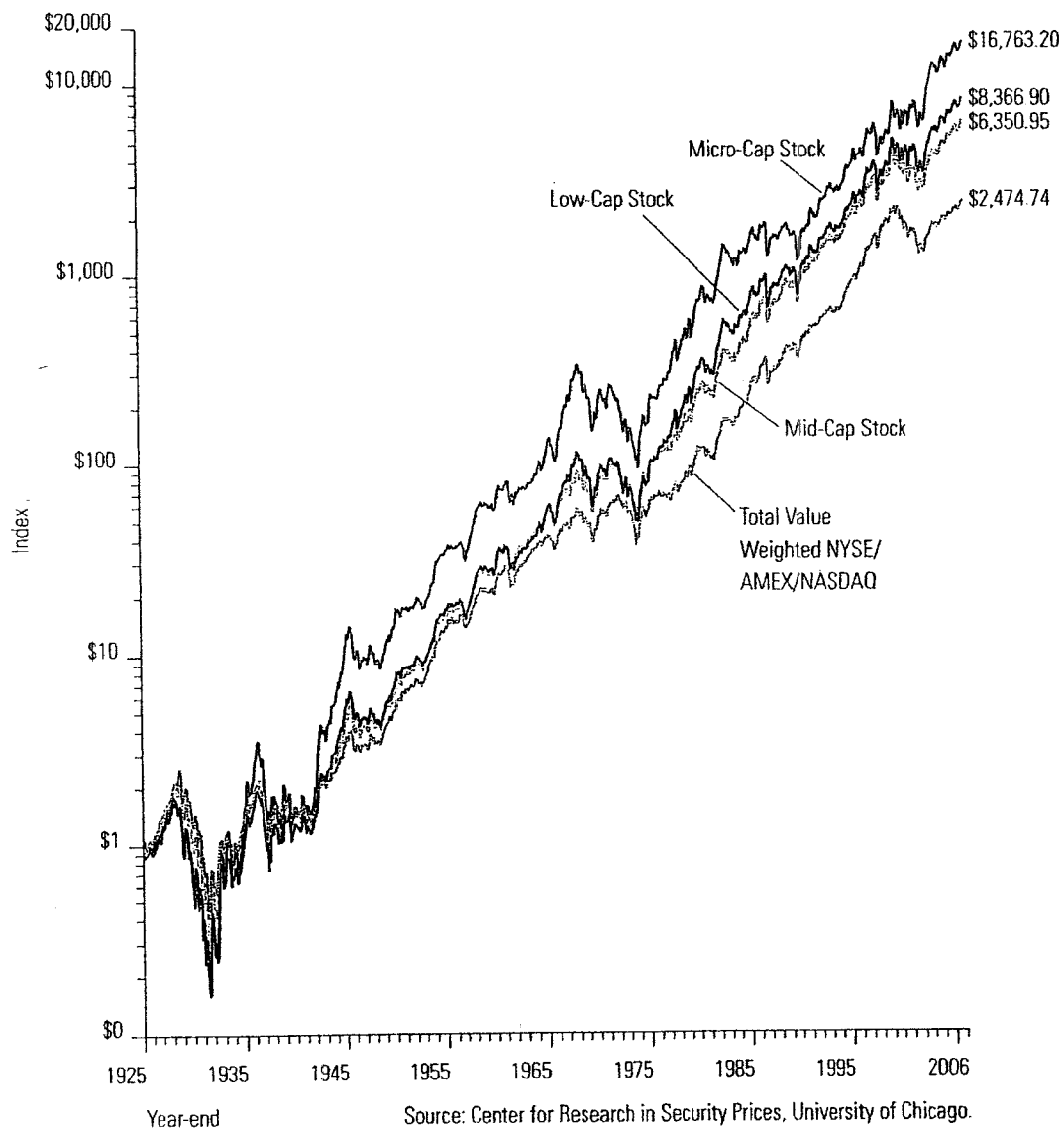
Firm Size and Return

Graph 7-1

**Size-Decile Portfolios of the NYSE/AMEX/NASDAQ: Wealth Indices of Investments in Mid-, Low-, Micro- and Total Capitalization Stocks**

Year-end 1925 = \$1.00

1925-2006



### Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model (CAPM) does not fully account for the higher returns of small company stocks. Table 7-5 shows the returns in excess of systematic risk over the past 81 years for each decile of the NYSE/AMEX/NASDAQ. Recall that the CAPM is expressed as follows:

$$k_s = r_f + (\beta_s \times ERP)$$

Table 7-5 uses the CAPM to estimate the return in excess of the riskless rate and compares this estimate to historical performance. According to the CAPM, the expected return on a security should consist of the riskless rate plus an additional return to compensate for the systematic risk of the security. The return in excess of the riskless rate is estimated in the context of the CAPM by multiplying the equity risk premium by  $\beta$  (beta). The equity risk premium is the return that compensates investors for taking on risk equal to the risk of the market as a whole (systematic risk).<sup>2</sup> Beta measures the extent to which a security or portfolio is exposed to systematic risk.<sup>3</sup> The beta of each decile indicates the degree to which the decile's return moves with that of the overall market.

A beta greater than one indicates that the security or portfolio has greater systematic risk than the market; according to the CAPM equation, investors are compensated for taking on this additional risk. Yet, Table 7-5 illustrates that the smaller deciles have had returns that are not fully explained by their higher betas. This return in excess of that predicted by CAPM increases as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9–10). This size-related phenomenon has prompted a revision to the CAPM, which includes a size premium. Chapter 4 presents this modified CAPM theory and its application in more detail.

This phenomenon can also be viewed graphically, as depicted in the Graph 7-2. The security market line is based on the pure CAPM without adjustment for the size premium. Based on the risk (or beta) of a security, the expected return lies on the security market line. However, the actual historic returns for the smaller deciles of the NYSE/AMEX/NASDAQ lie above the line, indicating that these deciles have had returns in excess of that which is appropriate for their systematic risk.

2. The equity risk premium is estimated by the 81-year arithmetic mean return on large company stocks, 12.34 percent, less the 81-year arithmetic mean income-return component of 20-year government bonds as the historical riskless rate, in this case 5.21 percent. (It is appropriate, however, to match the maturity, or duration, of the riskless asset with the investment horizon.) See Chapter 5 for more detail on equity risk premium estimation.

3. Historical betas were calculated using a simple regression of the monthly portfolio (decile) total returns in excess of the 30-day U.S. Treasury bill total returns versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2006. See Chapter 6 for more detail on beta estimation.



Firm Size and Return

Table 7-5  
**Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ**  
1926-2006

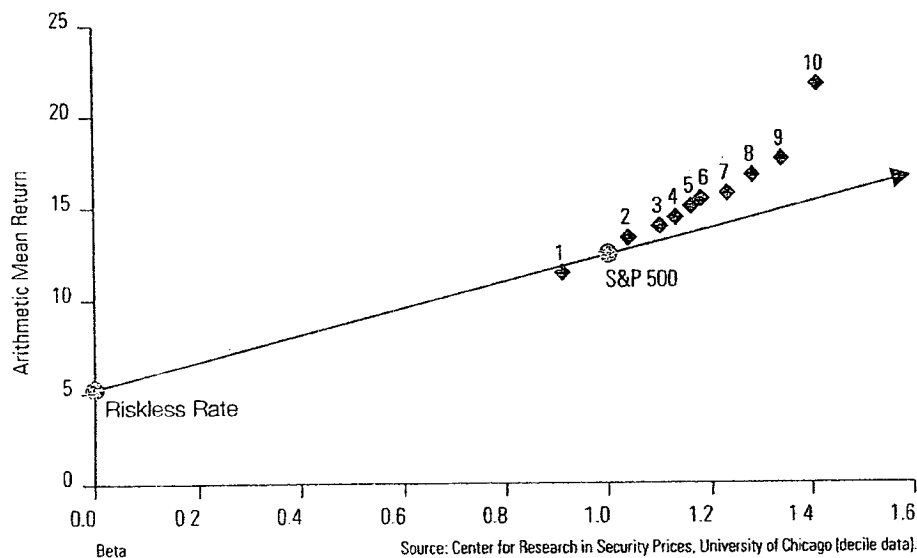
Decile	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0.91	11.35%	6.13%	6.49%	-0.36%
2	1.04	13.25%	8.04%	7.39%	0.65%
3	1.10	13.85%	8.64%	7.82%	0.81%
4	1.13	14.28%	9.07%	8.04%	1.03%
5	1.16	14.92%	9.71%	8.26%	1.45%
6	1.18	15.33%	10.11%	8.45%	1.67%
7	1.23	15.63%	10.42%	8.80%	1.62%
8	1.28	16.61%	11.39%	9.12%	2.28%
9	1.34	17.48%	12.27%	9.57%	2.70%
10-Smallest	1.41	21.57%	16.36%	10.09%	6.27%
Mid-Cap, 3-5	1.12	14.15%	8.94%	7.97%	0.97%
Low-Cap, 6-8	1.22	15.67%	10.46%	8.70%	1.76%
Micro-Cap, 9-10	1.36	18.77%	13.56%	9.68%	3.88%

\*Betas are estimated from monthly portfolio total returns in excess of the 30-day U.S. Treasury bill total return versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926-December 2006.

\*\*Historical riskless rate is measured by the 81-year arithmetic mean income return component of 20-year government bonds (5.21 percent).

†Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (12.34 percent) minus the arithmetic mean income return component of 20-year government bonds (5.21 percent) from 1926-2006.

Graph 7-2  
**Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ**  
1926-2006



### Further Analysis of the 10th Decile

The size premia presented thus far do a great deal to explain the return due solely to size in publicly traded companies. However, by splitting the 10th decile into two size groupings we can get a closer look at the smallest companies. This magnification of the smallest companies will demonstrate whether the company size to size premia relationship continues to hold true.

As previously discussed, the method for determining the size groupings for size premia analysis was to take the stocks traded on the NYSE and break them up into 10 deciles, after which stocks traded on the AMEX and NASDAQ were allocated into the same size groupings. This same methodology was used to split the 10th decile into two parts: 10a and 10b, with 10b being the smaller of the two. This is equivalent to breaking the stocks down into 20 size groupings, with portfolios 19 and 20 representing 10a and 10b.

Table 7-7 shows that the pattern continues; as companies get smaller their size premium increases. There is a noticeable increase in size premium from 10a to 10b, which can also be demonstrated visually in Graph 7-3. This can be useful in valuing companies that are extremely small. Table 7-6 presents the size, composition, and breakpoints of deciles 10a and 10b. First, the recent number of companies and total decile market capitalization are presented. Then the largest company and its market capitalization are presented.

Breaking the smallest decile down lowers the significance of the results compared to results for the 10th decile taken as a whole, however. The same holds true for comparing the 10th decile with the Micro-Cap aggregation of the 9th and 10th deciles. The more stocks included in a sample the more significance can be placed on the results. While this is not as much of a factor with the recent years of data, these size premia are constructed with data back to 1926. By breaking the 10th decile down into smaller components we have cut the number of stocks included in each grouping. The change over time of the number of stocks included in the 10th decile for the NYSE/AMEX/NASDAQ is presented in Table 7-8. With fewer stocks included in the analysis early on, there is a strong possibility that just a few stocks can dominate the returns for those early years.

While the number of companies included in the 10th decile for the early years of our analysis is low, it is not too low to still draw meaningful results even when broken down into subdivisions 10a and 10b. All things considered, size premia developed for deciles 10a and 10b are significant and can be used in cost of capital analysis. These size premia should greatly enhance the development of cost of capital analysis for very small companies.

Table 7-6  
**Size-Decile Portfolios 10a and 10b of the NYSE/AMEX/NASDAQ,**  
**Largest Company and Its Market Capitalization**  
September 30, 2006

Decile	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Market Capitalization of Largest Company (in thousands)	Company Name
10a	511	124,268,473	314,433	M & F Worldwide Corp.
10b	1,237	103,630,389	173,439	Great Lakes Bancorp Inc. New

Note: These numbers may not aggregate to equal decile 10 figures.  
Source: Center for Research in Security Prices, University of Chicago

Firm Size and Return

Table 7-7  
**Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split**  
1926–2006

	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0.91	11.35%	6.13%	6.49%	-0.36%
2	1.04	13.25%	8.04%	7.39%	0.65%
3	1.10	13.85%	8.64%	7.82%	0.81%
4	1.13	14.28%	9.07%	8.04%	1.03%
5	1.16	14.92%	9.71%	8.26%	1.45%
6	1.18	15.33%	10.11%	8.45%	1.67%
7	1.23	15.63%	10.42%	8.80%	1.62%
8	1.28	16.61%	11.39%	9.12%	2.28%
9	1.34	17.48%	12.27%	9.57%	2.70%
10a	1.43	19.74%	14.53%	10.17%	4.35%
10b-Smallest	1.39	24.78%	19.57%	9.89%	9.68%
Mid-Cap, 3-5	1.12	14.15%	8.94%	7.97%	0.97%
Low-Cap, 6-8	1.22	15.67%	10.46%	8.70%	1.76%
Micro-Cap, 9-10	1.36	18.77%	13.56%	9.68%	3.88%

\*Betas are estimated from monthly portfolio total returns in excess of the 30-day U.S. Treasury bill total return versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2006.

\*\*Historical riskless rate is measured by the 81-year arithmetic mean income return component of 20-year government bonds (5.21 percent).

†Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (12.34 percent) minus the arithmetic mean income return component of 20-year government bonds (5.21 percent) from 1926–2006.

Graph 7-3  
**Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split**  
1926–2006

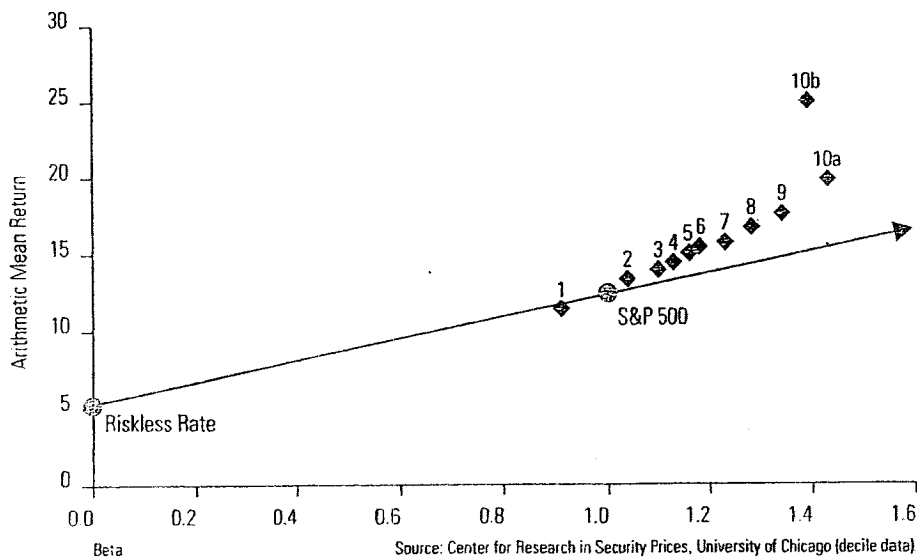


Table 7-8  
**Historical Number of Companies for NYSE/AMEX/NASDAQ Decile 10**

Sept.	Number of Companies
1926	52*
1930	72
1940	78
1950	100
1960	109
1970	865
1980	685
1990	1,814
2000	1,927
2005	1,746
2006	1,744

\*The fewest number of companies was 49 in March, 1926

Source: Center for Research in Security Prices, University of Chicago

#### Alternative Methods of Calculating the Size Premia

The size premia estimation method presented above makes several assumptions with respect to the market benchmark and the measurement of beta. The impact of these assumptions can best be examined by looking at some alternatives. In this section we will examine the impact on the size premia of using a different market benchmark for estimating the equity risk premia and beta. We will also examine the effect on the size premia study of using sum beta or an annual beta.<sup>4</sup>

#### Changing the Market Benchmark

In the original size premia study, the S&P 500 is used as the market benchmark in the calculation of the realized historical equity risk premium and of each size group's beta. The NYSE total value-weighted index is a common alternative market benchmark used to calculate beta. Table 7-9 uses this market benchmark in the calculation of beta. In order to isolate the size effect, we require an equity risk premium based on a large company stock benchmark. The NYSE deciles 1-2 large company index offers a mutually exclusive set of portfolios for the analysis of the smaller company groups: mid-cap deciles 3-5, low-cap deciles 6-8, and micro-cap deciles 9-10. The size premia analyses using these benchmarks are summarized in Table 7-9 and depicted graphically in Graph 7-4.

For the entire period analyzed, 1926-2006, the betas obtained using the NYSE total value-weighted index are higher than those obtained using the S&P 500. Since smaller companies had higher betas using the NYSE benchmark, one would expect the size premia to shrink. However, as was illustrated in Chapter 5, the equity risk premium calculated using the NYSE deciles 1-2 benchmark results in a value of 6.41, as opposed to 7.13 when using the S&P 500. The effect of the higher betas and lower equity risk premium cancel each other out, and the resulting size premia in Table 7-9 are slightly higher than those resulting from the original study.

<sup>4</sup> Sum beta is the method of beta estimation described in Chapter 6 that was developed to better account for the lagged reaction of small stocks to market movements. The sum beta methodology was developed for the same reason that the size premia were developed; small company betas were too small to account for all of their excess returns.

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# **Standard & Poor's CORPORATE RATINGS CRITERIA**

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STANDARD & POOR'S CORPORATE RATINGS CRITERIA

# Utilities

The utilities rating methodology encompasses two basic components: business risk analysis and financial analysis. Evaluation of industry characteristics, the utility's position within that industry, its regulation, and its management provides the context for assessing a firm's financial condition.

Historical analysis is a tool for identifying strengths and weaknesses, and provides a starting point for evaluating financial condition. Business position assessment is the qualitative measure of a utility's fundamental creditworthiness. It focuses on the forces that will shape the utilities' future.

## Utilities credit analysis factors

### Business risk

- Markets and service area economy
- Competitive position
- Operations
- Regulation
- Management
- Fuel, power, and water supply
- Asset concentration

### Financial risk

- Earnings protection
- Capital structure
- Cash flow adequacy
- Financial flexibility/capital attraction

The credit analysis of utilities is quickly evolving, as utilities are treated less as regulated monopolies and more as entities faced with a host of challengers in a competitive environment. Marketplace dynamics are supplanting the power of regulation, making it critically important to reduce costs and/or market new services in order to thwart competitors' inroads.

## Markets and service area economy

Assessing service territory begins with the economic and demographic evaluation of the area in which the utility has its franchise. Strength of long-term demand for the product is examined from a macroeconomic perspective. This enables Standard & Poor's to evaluate the affordability of rates and the staying power of demand.

Standard & Poor's tries to discern any secular consumption trends and, more importantly, the reasons for them. Specific items examined include the size and growth rate of the market, strength of the franchise, historical and projected sales growth, income levels and trends in population, employment, and per capita income. A utility with a healthy economy and customer base—as illustrated by diverse employment opportunities, average or above-average wealth and income statistics, and low unemployment—will have a greater capacity to support its operations.

ment—will have a greater capacity to support its operations.

For electric and gas utilities, distribution by customer class is scrutinized to assess the depth and diversity of the utility's customer mix. For example, heavy industrial concentration is viewed cautiously, since a utility may have significant exposure to cyclical volatility. Alternatively, a large residential component yields a stable and more predictable revenue stream. The largest utility customers are identified to determine their importance to the bottom line and assess the risk of their loss and potential adverse effect on the utility's financial position. Credit concerns arise when individual customers represent more than 5% of revenues. The company or industry may play a significant role in the overall economic base of the service area. Moreover, large customers may turn to cogeneration or alternative power supplies to meet their energy needs, potentially leading to reduced cash flow for the utility (even in cases where a large customer pays discounted rates and is not a profitable account for the utility). Customer concentration is less significant for water and telecommunication utilities.

## Competitive position

As competitive pressures have intensified in the utilities industry, Standard & Poor's analysis has deepened to include a more thorough review of competitive position.

### Electric utility competition

For electric utilities, competitive factors examined include: percentage of firm wholesale revenues that are most vulnerable to competition; industrial load concentration; exposure of key customers to alternative suppliers; commercial concentrations; rates for various customer classes; rate design and flexibility; production costs, both marginal and fixed; the regional capacity situation; and transmission constraints. A regional focus is evident, but high costs and rates relative to national averages are also of significant concern because of the potential for electricity substitutes over time.

Mounting competition in the electric utility industry derives from excess generating capacity, lower barriers to entering the electric generating business, and marginal costs that are below embedded costs. Standard & Poor's has already witnessed declining prices in wholesale markets, as *de facto* retail competition is already being seen in several parts of the country. Standard & Poor's believes that over the coming years more and more customers will want and demand lower prices. Initial concerns focus on the largest industrial loads, but other customer classes will be increasingly vulnerable. Competition will not necessarily

STANDARD & POOR'S CORPORATE RATINGS CRITERIA

ily be driven by legislation. Other pressures will arise from global competition and improving technologies, whether it be the declining cost of incremental generation or advances in transmission capacity or substitute energy sources like the fuel cell. It is impossible to say precisely when wide-open retail competition will occur; this will be evolutionary. However, significantly greater competition in retail markets is inevitable.

#### Gas utility competition

Similarly, gas utilities are analyzed with regard to their competitive standing in the three major areas of demand: residential, commercial, and industrial. Although regulated as holders of monopoly power, natural gas utilities have for some time been actively competing for energy market share with fuel oil, electricity, coal, solar, wood, etc. The long-term staying power of market demand for natural gas cannot be taken for granted. In fact, as the electric utility industry restructures and reduces costs, electric power will become more cost competitive and threaten certain gas markets. In addition, independent gas marketers have made greater inroads behind the city gate and are competing for large gas users. Moreover, the recent trend by state regulators to unbundle utility services is creating opportunities for outsiders to market niche products. Distributors still have the upper hand, but those who do not reduce and control costs, and thus rates, could find competition even more difficult.

Natural gas pipelines are judged to carry a somewhat higher business risk than distribution companies because they face competition in every one of their markets. To the extent a pipeline serves utilities versus industrial end users, its stability is greater. Over the next five years, pipeline competition will heat up since many service contracts with customers are expiring. Most distributor or end-use customers are looking to reduce pipeline costs and are working to improve their load factor to do so. Thus, pipelines will likely find it difficult to recontract all capacity in coming years. Being the pipeline of choice is a function of attractive transportation rates, diversity and quality of services provided, and capacity available in each particular market. In all cases though, periodic discounting of rates to retain customers will occur and put pressure on profitability.

#### Water utility competition

As the last true utility monopoly, water utilities face very little competition and there is currently no challenge to the continuation of franchise areas. The only exceptions have been cases where investor-owned water companies have been subject to condemnation and municipalization because of poor service or political motivations. In that regard, Standard & Poor's pays close attention to costs and rates in relation to neighboring utilities and national averages. (In contrast, the privatization of public water facilities has begun, albeit at a slower pace than anticipated. This is occurring mostly in the form of operating contracts and public/private partnerships, and not in asset transfers. This trend should continue as cities look for ways to bal-

ance their tight budgets.) Also, water utilities are not fully immune to the forces of competition; in a few instances wholesale customers can access more than one supplier.

#### Telephone competition

The Telecommunications Act of 1996 accelerates the continuing challenge to the local exchange companies' (LECs) century-old monopoly in the local loop. Competitive access providers (CAPs), both facilities-based and resellers, are aggressively pursuing customers, generally targeting metropolitan areas, and promising lower rates and better service.

Most long-distance calls are still originated and terminated on the local telephone company network. To complete such a call, the long-distance provider (including AT&T, MCI, Sprint and a host of smaller interexchange carriers or "IXCs") must pay the local telephone company a steep "access" fee to compensate the local phone company for the use of its local network. CAPs, in contrast, build or lease facilities that directly connect customers to their long-distance carrier, bypassing the local telephone company and avoiding access fees, and thereby can offer lower long-distance rates. But the LECs are not standing still; they are combating the loss of business to CAPs by lowering access fees, thereby reducing the economic incentive for a high usage long-distance customer to use a CAP. LECs are attempting to make up for the loss of revenues from lower access fees by increasing basic local service rates (or at least not lowering them), since basic service is far less subject to competition. LECs are improving operating efficiency and marketing high margin, value-added new services. Additionally, in the wake of the Telecommunications Act, LECs will capture at least some of the Inter-LATA long-distance market. As a result of these initiatives, LECs continue to rebuild themselves—from the traditional utility monopoly to leaner, more marketing oriented organizations.

While LECs, and indeed all segments of the telecommunications sector, face increasing competition, there are favorable industry factors that tend to offset heightened business risk and auger for overall ratings stability for most LECs. Importantly, telecommunications is a declining-cost business. With increased deployment of fiber optics, the cost of transport has fallen dramatically and digital switching hardware and software have yielded more capable, trouble-free and cost-efficient networks. As a result, the cost of network maintenance has dropped sharply, as illustrated by the ratio of employees per 10,000 access lines, an oft cited measurement of efficiency. Ratios as low as 25 employees per 10,000 lines are being seen, down from the typical 40 or more employees per 10,000 ratio of only a few years ago.

In addition, networks are far more capable. They are increasingly digitally switched and able to accommodate high-speed communications. The infrastructure needed to accommodate switched broadband services will be built into telephone networks over the next few years. These advanced networks will enable telephone companies to look to a greater variety of high-margin, value-added serv-



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ices. In addition to those current services such as call waiting or caller ID, the delivery of hundreds of broadcast and interactive video channels will be possible. While these services offer the potential of new revenue streams, they will simultaneously present a formidable challenge. LECs will be entering the new (to them) arena of multimedia entertainment and will have to develop expertise in marketing and entertainment programming acumen; such skills stand in sharp contrast to LECs' traditional strengths in engineering and customer service.

## Operations

Standard & Poor's focuses on the nature of operations from the perspective of cost, reliability, and quality of service. Here, emphasis is placed on those areas that require management attention in terms of time or money and which, if unresolved, may lead to political, regulatory, or competitive problems.

### Operations of electric utilities

For electric utilities, the status of utility plant investment is reviewed with regard to generating plant availability and utilization, and also for compliance with existing and contemplated environmental and other regulatory standards. The record of plant outages, equivalent availability, load factors, heat rates, and capacity factors are examined. Also important is efficiency, as defined by total megawatt hour per employee and customers per employee. Transmission interconnections are evaluated in terms of the number of utilities to which the utility in question has access, the cost structures and available generating capacity of these other utilities, and the price paid for wholesale power.

Because of mounting competition and the substantial escalation in decommissioning estimates, significant weight is given to the operation of nuclear facilities. Nuclear plants are becoming more vulnerable to high production costs that make their rates uneconomic. Significant asset concentration may expose the utility to poor performance, unscheduled outages or premature shutdowns, and large deferrals or regulatory assets that may need to be written off for the utility to remain competitive. Also, nuclear facilities tend to represent significant portions of their operators' generating capability and assets. The loss of a productive nuclear unit from both power supply and rate base can interrupt the revenue stream and create substantial additional costs for repairs and improvements and replacement power. The ability to keep these stations running smoothly and economically directly influences the ability to meet electric demand, the stability of revenues and costs, and, by extension, the ability to maintain adequate creditworthiness. Thus, economic operation, safe operation, and long-term operation are examined in depth. Specifically, emphasis is placed on operation and maintenance costs, busbar costs, fuel costs, refueling outages, forced outages, plant statistics, NRC evaluations, the potential need for repairs, operating licenses, decommissioning estimates and amounts held in external trusts, spent fuel storage capacity, and management's nuclear experi-

ence. In essence, favorable nuclear operations offer significant opportunities but, if a nuclear unit runs poorly or not at all, the attendant risks can be great.

### Operations of gas utilities

For gas pipeline and distribution companies, the degree of plant utilization, the physical condition of the mains and lines, adequacy of storage to meet seasonal needs, "lost and unaccounted for" gas levels, and per-unit nongas operating and construction costs are important factors. Efficiency statistics such as load factor, operating costs per customer, and operating income per employee are also evaluated in comparison to other utilities and the industry as a whole.

### Operations of water utilities

As a group, water utilities are continually upgrading their physical plant to satisfy regulations and to develop additional supply. Over the next decade, water systems will increasingly face the task of maintaining compliance, as drinking water regulations change and infrastructure ages. Given that the Safe Drinking Water Act was authorized in 1974, the first generation of treatment plants built to conform with these rules are almost 20 years old. Additionally, because the focus during this period was on satisfying environmental standards, deferred maintenance of distribution systems has been common, especially in older urban areas. The increasing cost of supplying treated water argues against the high level of unaccounted for water witnessed in the industry. Consequently, Standard & Poor's anticipates capital plans for rebuilding distribution lines and major renewal and replacement efforts aimed at treatment plants.

### Operations of telephone companies

For telephone companies, cost-of-service analysis focuses on plant capability and measures of efficiency and quality of service. Plant capability is ascertained by looking at such parameters as percentage of digitally switched lines; fiber optic deployment, in particular in those portions of the plant key to network survival; and the degree of broadband capacity fiber and coaxial deployment and broadband switching capacity. Efficiency measures include operating margins, the ratio of employees per 10,000 access lines, and the extent of network and operations consolidation. Quality of service encompasses examination of quantitative measures, such as trouble reports and repeat service calls, as well as an assessment of qualitative factors, that may include service quality goals mandated by regulators.

## Regulation

Regulatory rate-setting actions are reviewed on a case-by-case basis with regard to the potential effect on creditworthiness. Regulators' authorizing high rates of return is of little value unless the returns are earnable. Furthermore, allowing high returns based on noncash items does not benefit bondholders. Also, to be viewed positively, regulatory treatment should allow consistent performance from

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period to period, given the importance of financial stability as a rating consideration.

The utility group meets frequently with commission and staff members, both at Standard & Poor's offices and at commission headquarters, demonstrating the importance Standard & Poor's places on the regulatory arena for credit quality evaluation. Input from these meetings and from review of rate orders and their impact weigh heavily in Standard & Poor's analysis.

Standard & Poor's does not "rate" regulatory commissions. State commissions typically regulate a number of diverse industries, and regulatory approaches to different types of companies often differ within a single regulatory jurisdiction. This makes it all but impossible to develop inclusive "ratings" for regulators.

Standard & Poor's evaluation of regulation also encompasses the administrative, judicial, and legislative processes involved in state and federal regulation. These can affect rate-setting activities and other aspects of the business, such as competitive entry, environmental and safety rules, facility siting, and securities sales.

As the utility industry faces an increasingly deregulated environment, alternatives to traditional rate-making are becoming more critical to the ability of utilities to effectively compete, maintain earnings power, and sustain creditor protection. Thus, Standard & Poor's focuses on whether regulators, both state and federal, will help or hinder utilities as they are exposed to greater competition. There is much that regulators can do, from allocating costs to more captive customers to allowing pricing flexibility—and sometimes just stepping out of the way.

Under traditional rate-making, rates and earnings are tied to the amount of invested capital and the cost of capital. This can sometimes reward companies more for justifying costs than for containing them. Moreover, most current regulatory policies do not permit utilities to be flexible when responding to competitive pressures of a deregulated market. Lack of flexible tariffs for electric utilities may lure large customers to wheel cheaper power from other sources.

In general, a regulatory jurisdiction is viewed favorably if it permits earning a return based on the ability to sustain rates at competitive levels. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Such rates more closely mirror the competitive environment that utilities are confronting.

#### Electric industry regulation

The ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract is also important in the electric industry. (While contracting at reduced rates constrains financial performance, it lessens the potential adverse impact in the event of retail wheeling. Since revenue losses associated with this strategy are not likely to be recovered from ratepayers, utilities must control costs well enough to remain

competitive if they are to sustain current levels of bondholder protection.)

#### Natural gas industry regulation

In the gas industry, too, several state commission policies weigh heavily in the evaluation of regulatory support. Examples include stabilization mechanisms to adjust revenues for changes in weather or the economy, rate and service unbundling decisions, revenue and cost allocation between sales and transportation customers, flexible industrial rates, and the general supportiveness of construction costs and gas purchases.

#### Water industry regulation

In all water utility activities, federal and state environmental regulations continue to play a critical role. The legislative timetable to effect the 1986 amendments to the Safe Drinking Water Act of 1974 was quite aggressive. But environmental standards-setting has actually slowed over the past couple of years due largely to increasing sentiment that the stringent, costly standards have not been justified on the basis of public health. A moratorium on the promulgation of significant new environmental rules is anticipated.

#### Telecommunications industry regulation

Despite the advances in telecommunications deregulation, analysis of regulation of telephone operators will continue to be a key rating determinant for the foreseeable future. The method of regulation may be either classic rate-based rate of return or some form of price cap mechanism. The most important factor is to assess whether the regulatory framework—no matter which type—provides sufficient financial incentive to encourage the rated company to maintain its quality of service and to upgrade its plant to accommodate new services while facing increasing competition from wireless operators and cable television companies.

Where regulators do still set tariffs based on an authorized return, Standard & Poor's strives to explore with regulators their view of the rate-of-return components that can materially impact reported versus regulatory earnings. Specifically these include the allowable base upon which the authorized return can be earned, allowable expenses, and the authorized return. Since regulatory oversight runs the gamut from strict, adversarial relationships with the regulated operating companies to highly supportive postures, Standard & Poor's probes beyond the apparent regulatory environment to ascertain the actual impact of regulation on the rated company.

#### Management

Evaluating the management of a utility is of paramount importance to the analytical process since management's abilities and decisions affect all areas of a company's operations. While regulation, the economy, and other outside factors can influence results, it is ultimately the quality of management that determines the success of a company.

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With emerging competition, utility management will be more closely scrutinized by Standard & Poor's and will become an increasingly critical component of the credit evaluation. Management strategies can be the key determinant in differentiating utilities and in establishing where companies lie on the business position spectrum. It is imperative that managements be adaptable, aggressive, and proactive if their utilities are to be viable in the future; this is especially important for utilities that are currently uncompetitive.

The assessment of management is accomplished through meetings, conversations, and reviews of company plans. It is based on such factors as tenure, industry experience, grasp of industry issues, knowledge of customers and their needs, knowledge of competitors, accounting and financing practices, and commitment to credit quality. Management's ability and willingness to develop workable strategies to address their systems' needs, to deal with the competitive pressures of free market, to execute reasonable and effective long-term plans, and to be proactive in leading their utilities into the future are assessed. Management quality is also indicated by thoughtful balancing of public and private priorities, a record of credibility, and effective communication with the public, regulatory bodies, and the financial community. Boards of directors will receive ever more attention with respect to their role in setting appropriate management incentives.

With competition the watchword, Standard & Poor's also focuses on management's efforts to enhance financial condition. Management can bolster bondholder protection by taking any number of discretionary actions, such as selling common equity, lowering the common dividend payout, and paying down debt. Also important for the electric industry will be creativity in entering into strategic alliances and working partnerships that improve efficiency, such as central dispatching for a number of utilities or locking up at-risk customers through long-term contracts or expanded flexible pricing agreements. Proactive management teams will also seek alternatives to traditional rate-base, rate-of-return rate-making, move to adopt higher depreciation rates for generating facilities, segment customers by individual market preferences, and attempt to create superior service organizations.

In general, management's ability to respond to mounting competition and changes in the utility industry in a swift and appropriate manner will be necessary to maintain credit health.

### ***Fuel, power, and water supply***

Assessment of present and prospective fuel and power supply is critical to every electric utility analysis, while gauging the long-term natural gas supply position for gas pipeline and distribution companies and the water resources of a water utility is equally important. There is no similar analytical category for telephone utilities.

#### **Electric utilities**

For electric utilities emphasis is placed on generating

reserve margins, fuel mix, fuel contract terms, demand-side management techniques, and purchased power arrangements. The adequacy of generating margins is examined nationally, regionally, and for each individual company. However, the reserve margin picture is muddied by the imprecise nature of peak-load growth forecasting, and also supply uncertainty relating to such things as Canadian capacity availability and potential plant shut-downs due to age, new NRC rules, acid rain remedies, fuel shortages, problems associated with nontraditional technologies, and so forth. Even apparently ample reserves may not be what they seem. Moreover, the quality of capacity is just as important as the size of reserves. Companies' reserve requirements differ, depending upon individual operating characteristics.

Fuel diversity provides flexibility in a changing environment. Supply disruptions and price hikes can raise rates and ignite political and regulatory pressures that ultimately lead to erosion in financial performance. Thus, the ability to alter generating sources and take advantage of lower cost fuels is viewed favorably.

Dependence on any single fuel means exposure to that fuel's problems: electric utilities that rely on oil or gas face the potential for shortages and rapid price increases; utilities that own nuclear generating facilities face escalating costs for decommissioning; and coal-fired capacity entails environmental problems stemming from concerns over acid rain and the "greenhouse effect."

Buying power from neighboring utilities, qualifying facility projects, or independent power producers may be the best choice for a utility that faces increasing electricity demand. There has been a growing reliance on purchased power arrangements as an alternative to new plant construction. This can be an important advantage, since the purchasing utility avoids potential construction cost overruns as well as risking substantial capital. Also, utilities can avoid the financial risks typical of a multiyear construction program that are caused by regulatory lag and prudence reviews. Furthermore, purchased power may enhance supply flexibility, fuel resource diversity, and maximize load factors. Utilities that plan to meet demand projections with a portfolio of supply-side options also may be better able to adapt to future growth uncertainties. Notwithstanding the benefits of purchasing, such a strategy has risks associated with it. By entering into a firm long-term purchased power contract that contains a fixed-cost component, utilities can incur substantial market, operating, regulatory, and financial risks. Moreover, regulatory treatment of purchased power removes any upside potential that might help offset the risks. Utilities are not compensated through incentive rate-making; rather, purchased power is recovered dollar-for-dollar as an operating expense.

To analyze the financial impact of purchased power, Standard & Poor's first calculates the net present value of future annual capacity payments (discounted at 10%). This represents a potential debt equivalent—the off-balance-sheet obligation that a utility incurs when it enters into a long-term purchased power contract. However, Standard

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& Poor's adds to the utility's balance sheet only a portion of this amount, recognizing that such a contractual arrangement is not entirely the equivalent of debt. What percentage is added is a function of Standard & Poor's qualitative analysis of the specific contract and the extent to which market, operating, and regulatory risks are borne by the utility (the risk factor). For unconditional, take-or-pay contracts, the risk factor range is from 40%-80%, with the average hovering around 60%. A lower risk factor is typically assigned for system purchases from coal-fired utilities and a higher risk factor is usually designated for unit-specific nuclear purchases. The range for take-and-pay performance obligations is between 10%-50%.

**Gas utilities**

For gas distribution utilities, long-term supply adequacy obviously is critical, but the supply role has become even more important in credit analysis since the Federal Energy Regulatory Commission's Order 636 eliminated the interstate pipeline merchant business. This thrust gas supply responsibilities squarely on local gas distributors. Standard & Poor's has always believed distributor management has the expertise and wherewithal to perform the job well, but the risks are significant since gas costs are such a large percentage of total utility costs. In that regard, it is important for utilities to get preapprovals of supply plans by state regulators or at least keep the staff and commissioners well informed. To minimize risks, a well-run program would diversify gas sources among different producers or marketers, different gas basins in the U.S. and Canada, and different pipeline routes. Also, purchase contracts should be firm, with minimal take-or-pay provisions, and have prices tied to an industry index. A modest percentage of fixed-price gas is not unreasonable. Contracts, whether of gas purchases or pipeline capacity, should be intermediate term. Staggering contract expirations (preferably annually) provides an opportunity to be an active market player. A modest degree of reliance on spot purchases provides flexibility, as does the use of market-based storage. Gas storage and on-property gas resources such as liquefied natural gas or propane air are effective peak-day and peak-season supply management tools.

Since pipeline companies no longer buy and sell natural gas and are just common carriers, connections with varied reserve basins and many wells within those basins are of great importance. Diversity of sources helps offset the risks arising from the natural production declines eventually experienced by all reserve basins and individual wells. Moreover, such diversity can enhance a pipeline's attractiveness as a transporter of natural gas to distributors and end users seeking to buy the most economical gas available for their needs.

**Water utilities**

Nearly all water systems throughout the U.S. have ample long-term water supplies. Yet to gain comfort, Standard & Poor's assesses the production capability of treatment plants and the ability to pump water from underground aquifers in relation to the usage demands from consumers.

Having adequate treated water storage facilities has become important in recent years and has helped many systems meet demands during peak summer periods. Of interest is whether the resources are owned by the utility or purchased from other utilities or local authorities. Owning properties with water rights provides more supply security. This is especially so in states like California where water allocations are being reduced, particularly since recent droughts and environmental issues have created alarm. Since the primary cost for water companies is treatment, it makes little difference whether raw water is owned or bought. In fact, compliance with federal and state water regulations is very high, and the overall cost to deliver treated water to consumers remains relatively affordable.

**Asset concentration in the electric utility industry**

In the electric industry, Standard & Poor's follows the operations of major generating facilities to assess if they are well managed or troubled. Significant dependence on one generating facility or a large financial investment in a single asset suggests high risk. The size or magnitude of a particular asset relative to total generation, net plant in service, and common equity is evaluated. Where substantial asset concentration exists, the financial profile of a company may experience wide swings depending on the asset's performance. Heavy asset concentration is most prevalent among utilities with costly nuclear units.

**Earnings protection**

In this category, pretax cash income coverage of all interest charges is the primary ratio. For this calculation, allowance for funds used during construction (AFUDC) is removed from income and interest expense. AFUDC and other such noncash items do not provide any protection for bondholders. To identify total interest expense, the analyst reclassifies certain operating expenses. The interest component of various off-balance-sheet obligations, such as leases and some purchased-power contracts, is included in interest expense. This provides the most direct indication of a utility's ability to service its debt burden.

While considerable emphasis in assessing credit protection is placed on coverage ratios, this measure does not provide the entire earnings protection picture. Also important are a company's earned returns on both equity and capital, measures that highlight a firm's earnings performance. Consideration is given to the interaction of embedded costs, financial leverage, and pretax return on capital.

**Capital structure**

Analyzing debt leverage goes beyond the balance sheet and covers quasi-debt items and elements of hidden financial leverage. Noncapitalized leases (including sale/lease-back obligations), debt guarantees, receivables financing, and purchased-power contracts are all considered debt equivalents and are reflected as debt in calculating capital

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structure ratios. By making debt level adjustments, the analyst can compare the degree of leverage used by each utility company.

Furthermore, assets are examined to identify undervalued or overvalued items. Assets of questionable value are discounted to more accurately evaluate asset protection.

Some firms use short-term debt as a permanent piece of their capital structure. Short-term debt also is considered part of permanent capital when it is used as a bridge to permanent financing. Seasonal, self-liquidating debt is excluded from the permanent debt amount, but this situation is rare—with the exception of certain gas utilities. Given the long life of almost all utility assets, short-term debt may expose these companies to interest-rate volatility, remarketing risk, bank line backup risk, and regulatory exposure that cannot be readily offset. The lower cost of shorter-term obligations (assuming a positively sloped yield curve) is a positive factor that partially mitigates the risk of interest-rate variability. As a rule of thumb, a level of short-term debt that exceeds 10% of total capital is cause for concern.

Similarly, if floating-rate debt and preferred stock constitute over one-third of total debt plus preferred stock, this level is viewed as unusually high and may be cause for concern. It might also indicate that management is aggressive in its financial policies.

A layer of preferred stock in the capital structure is usually viewed as equity—since dividends are discretionary and the subordinated claim on assets provides a cushion for providers of debt capital. A preferred component of up to 10% is typically viewed as a permanent wedge in the capital structure of utilities. However, as rate-of-return regulation is phased out, preferred stock may be viewed by utilities—as many industrial firms would—as a temporary option for companies that are not current taxpayers that do not benefit from the tax deductibility of interest. Even now, floating-rate preferred and money market perpetual preferred are problematic; a rise in the rate due to deteriorating credit quality tends to induce a company to take out such preferred stock with debt. Structures that convey tax deductibility to preferred stock have become very popular and do generally afford such financings with equity treatment.

### *Cash flow adequacy*

Cash flow adequacy relates to a company's ability to generate funds internally relative to its needs. It is a basic component of credit analysis because it takes cash to pay expenses, fund capital spending, pay dividends, and make interest and principal payments. Since both common and preferred dividend payments are important to maintain capital market access, Standard & Poor's looks at cash flow measures both before and after dividends are paid.

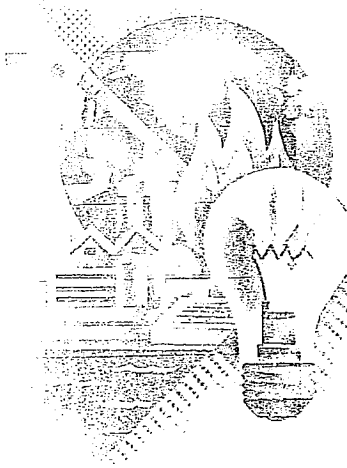
To determine cash flow adequacy, several quantitative relationships are examined. Emphasis is placed on cash flow relative to debt, debt service requirements, and capital spending. Cash flow adequacy is evaluated with respect to a firm's ability to meet all fixed charges, including capacity payments under purchased-power contracts. Despite the conditional nature of some contracts, the purchaser is obligated to pay a minimum capacity charge. The ratio used is funds from operations plus interest and capacity payments divided by interest plus capacity payments.

### *Financial flexibility/capital attraction*

Financing flexibility incorporates a utility's financing needs, plans, and alternatives, as well as its flexibility to accomplish its financing program under stress without damaging creditworthiness. External funding capability complements internal cash flow. Especially since utilities are so capital intensive, a firm's ability to tap capital markets on an ongoing basis must be considered. Debt capacity reflects all the earlier elements: earnings protection, debt leverage, and cash flow adequacy. Market access at reasonable rates is restricted if a reasonable capital structure is not maintained and the company's financial prospects dim. The analyst also reviews indenture restrictions and the impact of additional debt on covenant tests.

Standard & Poor's assesses a company's capacity and willingness to issue common equity. This is affected by various factors, including the market-to-book ratio, dividend policy, and any regulatory restrictions regarding the composition of the capital structure.

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**STANDARD  
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Feature Article

## New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised

Standard & Poor's Ratings Services has assigned new business profile scores to U.S. utility and power companies to better reflect the relative business risk among companies in the sector. Standard & Poor's also has revised its published risk-adjusted financial guidelines. The new business scores and financial guidelines do not represent a change to Standard & Poor's ratings criteria or methodology, and no ratings changes are anticipated from the new business profile scores or revised financial guidelines.

### New Business Profile Scores and Revised Financial Guidelines

Standard & Poor's has always monitored changes in the industry and altered its business risk assessments accordingly. This is the first time since the 10-point business pro-

file scale for U.S. investor-owned utilities was implemented that a comprehensive assessment of the benefits and the application of the methodology has been made. The principal purpose was to determine if the methodology continues to provide meaningful differentiation of business risk. The review indicated that while business profile scoring continues to provide analytical benefits, the complete range of the 10-point scale was not being utilized to the fullest extent.

Standard & Poor's has also revised the key financial guidelines that it uses as an integral part of evaluating the credit quality of U.S. utility and power companies. These guidelines were last updated in June 1999. The financial guidelines for three principal ratios (funds from operations (FFO) interest coverage, FFO to total debt, and total debt to total capital) have been broadened so as to be more flexible. Pretax interest cov-

Chart 1  
Distribution of Business Profile Scores

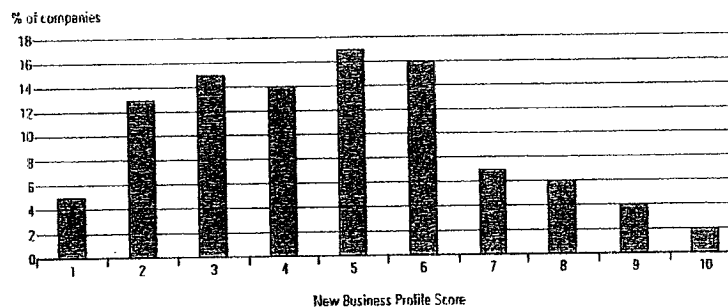
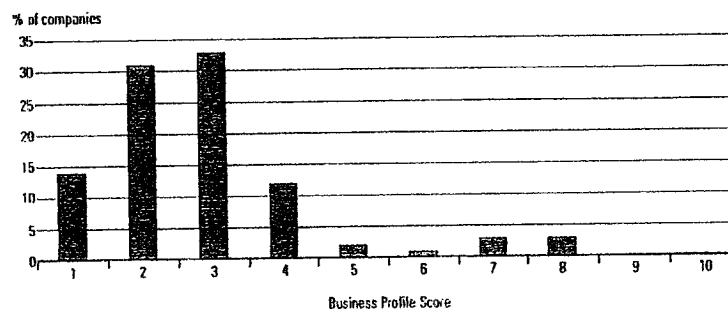


Chart 2  
Transmission and Distribution—Water, Gas, and Electric



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erage as a key credit ratio was eliminated.

Finally, Standard & Poor's has segmented the utility and power industry into sub-sectors based on the dominant corporate strategy that a company is pursuing. Standard & Poor's has published a new U.S. utility and power company ranking list that reflects these sub-sectors.

There are numerous benefits to the reassessment. Fuller utilization of the entire 10-point scale provides a superior relative ranking of qualitative business risk. A revision of the financial guidelines supports the goal of not causing rating changes from the recalibration of the business profiles. Classification of companies by sub-sectors will ensure greater comparability and consistency in ratings. The use of industry segmentation will also allow more in-depth statistical analysis of ratings distributions and rating changes.

The reassessment does not represent a change to Standard & Poor's criteria or methodology for determining ratings for utility and power companies. Each business profile score should be considered as the assignment of a new score; these scores do not represent improvement or deteri-

oration in our assessment of an individual company's business risk relative to the previously assigned score. The financial guidelines continue to be risk-adjusted based on historical utility and industrial medians. Segmentation into industry sub-sectors does not imply that specific company characteristics will not weigh heavily into the assignment of a company's business profile score.

### Results

Previously, 83% of U.S. utility and power business profile scores fell between '3' and '6', which clearly does not reflect the risk differentiation that exists in the utility and power industry today. Since the 10-point scale was introduced, the industry has transformed into a much less homogenous industry, where the divergence of business risk—particularly regarding management, strategy, and degree of competitive market exposure—has created a much wider spectrum of risk profiles. Yet over the same period, business profile scores actually converged more tightly around a median score of '4'. The new business pro-

Chart 3  
**Transmission Only—Electric, Gas, and Other**

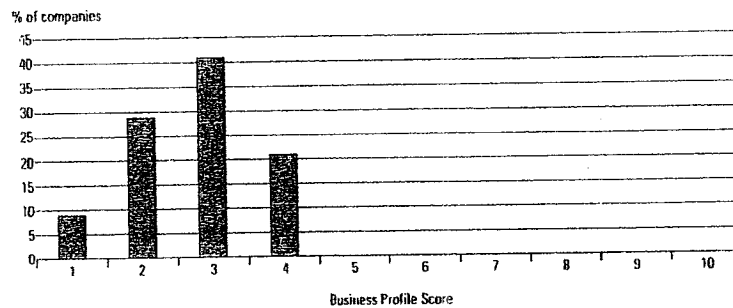
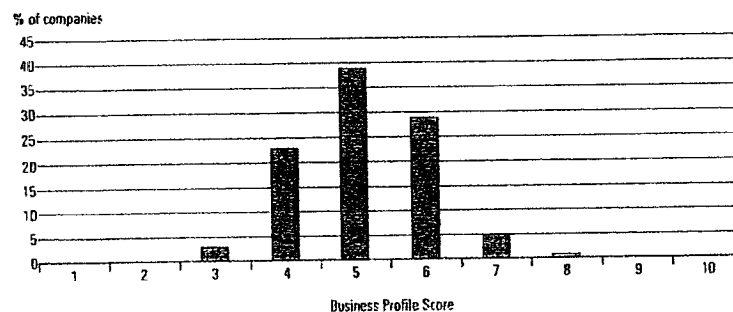


Chart 4  
**Integrated Electric, Gas, and Combination Utilities**





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file scores, as of June 2, are shown in Chart 1. The overall median business profile score is now "5".

Table 1 contains the revised financial guidelines. It is important to emphasize that these metrics are only guidelines associated with expectations for various rating levels. Although credit ratio analysis is an important part of the ratings process, these three statistics are by no means the only critical financial measures that Standard & Poor's uses in its analytical process. We also analyze a wide array of financial ratios that do not have published guidelines for each rating category.

Again, ratings analysis is not driven solely by these financial ratios, nor has it ever been. In fact, the new financial guidelines that Standard & Poor's is incorporating for the specified rating categories reinforce the analytical framework whereby other factors can outweigh the achievement of otherwise acceptable financial ratios. These factors include:

- Effectiveness of liability and liquidity management,
- Analysis of internal funding sources;

- Return on invested capital,
- The execution record of stated business strategies,
- Accuracy of projected performance versus actual results, as well as the trend,
- Assessment of management's financial policies and attitude toward credit, and
- Corporate governance practices

Charts 2 through 6 show business profile scores broken out by industry sub-sector. The five industry sub-sectors are

- Transmission and distribution—Water, gas, and electric,
- Transmission only—Electric, gas, and other,
- Integrated electric, gas, and combination utilities,
- Diversified energy and diversified nonenergy, and
- Energy merchant/power developer/trading and marketing companies

The average business profile scores for transmission and distribution companies and transmission-only companies are lower on the scale than the previous averages, while the average business profile scores for integrated utilities, diversified energy, and energy merchants and developers are higher.

Chart 5  
**Diversified Energy and Diversified Non-Energy**

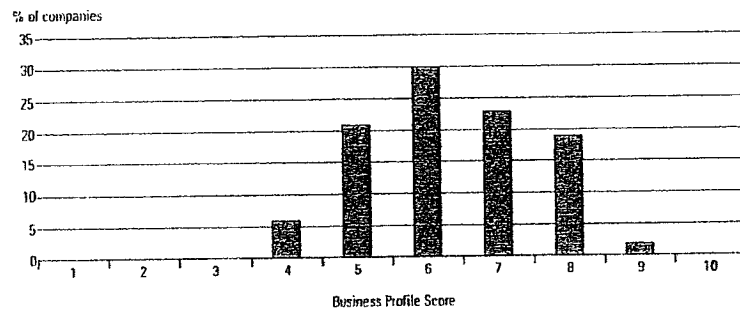
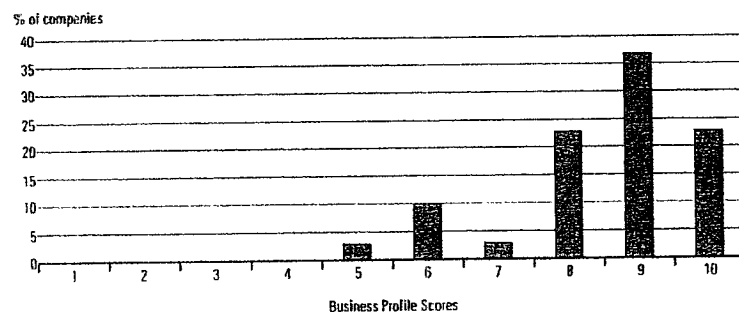


Chart 6  
**Energy Merchant/Developers/Trading and Marketing**



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See pages 16 to 19 for the company ranking list of business profile scores segmented by industry sub-sector and ranked in order of credit rating, outlook, business profile score, and relative strength

### Business Profile Score Methodology

Standard & Poor's methodology of determining corporate utility business risk is anchored in the assessment of certain specific characteristics that define the sector. We assign business profile scores to each of the rated companies in the utility and power sector on a 10-point scale, where '1' represents the lowest risk and '10' the highest risk. Business pro-

file scores are assigned to all rated utility and power companies, whether they are holding companies, subsidiaries, or stand-alone corporations. For operating subsidiaries and stand-alone companies, the score is a bottom-up assessment. Scores for families of companies are a composite of the operating subsidiaries' scores. The actual credit rating of a company is analyzed, in part, by comparing the business profile score with the risk-adjusted financial guidelines.

For most companies, business profile scores are assessed using five categories; specifically, regulation, markets, operations, competitiveness, and management. The emphasis placed on each category may be influenced by the

Table 1

### Revised Financial Guidelines

#### Funds from operations/interest coverage (x)

Business Profile	AA		A		BBB		BB	
1	3	2.5	2.5	1.5	1.5	1		
2	4	3	3	2	2	1		
3	4.5	3.5	3.5	2.5	2.5	1.5	1.5	1
4	5	4.2	4.2	3.5	3.5	2.5	2.5	1.5
5	5.5	4.5	4.5	3.8	3.8	2.8	2.8	1.8
6	6	5.2	5.2	4.2	4.2	3	3	2
7	8	6.5	6.5	4.5	4.5	3.2	3.2	2.2
8	10	7.5	7.5	5.5	5.5	3.5	3.5	2.5
9			10	7	7	4	4	2.8
10			11	8	8	5	5	3

#### Funds from operation/total debt (%)

Business Profile	AA		A		BBB		BB	
1	20	15	15	10	10	5		
2	25	20	20	12	12	8		
3	30	25	25	15	15	10	10	5
4	35	28	28	20	20	12	12	8
5	40	30	30	22	22	15	15	10
6	45	35	35	28	28	18	18	12
7	55	45	45	30	30	20	20	15
8	70	55	55	40	40	25	25	15
9			65	45	45	30	30	20
10			70	55	55	40	40	25

#### Total debt/total capital (%)

Business Profile	AA		A		BBB		BB	
1	48	55	55	60	60	70		
2	45	52	52	58	58	68		
3	42	50	50	55	55	65	65	70
4	38	45	45	52	52	62	62	68
5	35	42	42	50	50	60	60	65
6	32	40	40	48	48	58	58	62
7	30	38	38	45	45	55	55	60
8	25	35	35	42	42	52	52	58
9			32	40	40	50	50	55
10			25	35	35	48	48	52

## Feature Article

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dominant strategy of the company or other factors. For example, for a regulated transmission and distribution company, regulation may account for 30% to 40% of the business profile score because regulation can be the single-most important credit driver for this type of company. Conversely, competition, which may not exist for a transmission and distribution company, would provide a much lower proportion (e.g., 5% to 15%) of the business profile score.

For certain types of companies, such as power generators, power developers, oil and gas exploration and production companies, or nonenergy-related holdings, where these five components may not be appropriate, Standard & Poor's will use other, more appropriate methodologies. Some of these companies are assigned business profile scores that are useful only for relative ranking purposes.

As noted above, the business profile score for a parent or holding company is a composite of the business profile scores of its individual subsidiary companies. Again, Standard & Poor's does not apply rigid guidelines for deter-

mining the proportion or weighting that each subsidiary represents in the overall business profile score. Instead, it is determined based on a number of factors. Standard & Poor's will analyze each subsidiary's contribution to FFO, forecast capital expenditures, liquidity requirements, and other parameters, including the extent to which one subsidiary has higher growth. The weighting is determined case-by-case. ■

**Ronald M. Barone**

New York (1) 212-438-7662

**Richard W. Cortright, Jr.**

New York (1) 212-438-7665

**Suzanne G. Smith**

New York (1) 212-438-2106

**John W. Whitlock**

New York (1) 212-438-7678

**Andrew Watt**

New York (1) 212-438-7868

**Arthur F. Simonson**

New York (1) 212-438-2094

PROXY GROUP OF EIGHT AUS UTILITY REPORTS WATER COMPANIES  
CAPITALIZATION AND FINANCIAL STATISTICS (1)  
2002 - 2006, INCLUSIVE

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	
	(MILLIONS OF DOLLARS)					
<u>CAPITALIZATION STATISTICS</u>						
<u>AMOUNT OF CAPITAL EMPLOYED</u>						
TOTAL PERMANENT CAPITAL	\$532.756	\$478.132	\$446.177	\$400.276	\$348.252	
SHORT-TERM DEBT	<u>\$22.725</u>	<u>\$23.094</u>	<u>\$19.724</u>	<u>\$25.263</u>	<u>\$28.644</u>	
TOTAL CAPITAL EMPLOYED	<u>\$555.480</u>	<u>\$501.226</u>	<u>\$465.901</u>	<u>\$425.539</u>	<u>\$376.896</u>	
<u>INDICATED AVERAGE CAPITAL COST RATES (2)</u>						
TOTAL DEBT	6.32 %	6.15 %	6.18 %	6.30 %	6.54 %	
PREFERRED STOCK	5.12	5.05	4.79	4.11	5.52	
						<u>5 YEAR</u> <u>AVERAGE</u>
<u>CAPITAL STRUCTURE RATIOS</u>						
<u>BASED ON TOTAL PERMANENT CAPITAL.</u>						
LONG-TERM DEBT	48.72 %	50.93 %	50.26 %	50.81 %	50.65 %	50.27 %
PREFERRED STOCK	0.32	0.36	0.39	0.46	0.51	0.41
COMMON EQUITY	<u>50.96</u>	<u>48.71</u>	<u>49.35</u>	<u>48.73</u>	<u>48.84</u>	<u>49.32</u>
TOTAL	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %
<u>BASED ON TOTAL CAPITAL:</u>						
TOTAL DEBT, INCLUDING SHORT-TERM	50.20 %	52.45 %	52.01 %	53.82 %	53.62 %	52.42 %
PREFERRED STOCK	0.32	0.35	0.38	0.43	0.47	0.39
COMMON EQUITY	<u>49.48</u>	<u>47.20</u>	<u>47.61</u>	<u>45.75</u>	<u>45.91</u>	<u>47.19</u>
TOTAL	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %
<u>FINANCIAL STATISTICS</u>						
<u>FINANCIAL RATIOS - MARKET BASED</u>						
EARNINGS / PRICE RATIO	3.85 %	4.13 %	4.57 %	4.34 %	4.93 %	4.36 %
MARKET / AVERAGE BOOK RATIO	268.90	250.20	227.38	227.15	220.24	238.77
DIVIDEND YIELD	2.60	2.86	3.35	3.28	3.53	3.12
DIVIDEND PAYOUT RATIO	71.58	70.53	70.70	80.68	72.48	73.19
<u>RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY</u>	10.13 %	9.99 %	10.13 %	9.59 %	10.56 %	10.08 %
<u>FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)</u>	4.05 X	4.02 X	4.22 X	3.81 X	3.61 X	3.94 X
<u>FUNDS FROM OPERATIONS / TOTAL DEBT (4)</u>	18.91 %	18.16 %	19.60 %	16.97 %	16.43 %	18.01 %
<u>TOTAL DEBT / TOTAL CAPITAL</u>	50.20 %	52.45 %	52.01 %	53.82 %	53.62 %	52.42 %

See Page 2 for notes.

Proxy Group of Eight AUS Utility Reports Water Companies  
Capitalization and Financial Statistics  
2002-2006, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
- (3) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges divided by interest charges.
- (4) Funds from operations (as defined in Note 3) as a percentage of total debt.

Selection Criteria:

The basis of selection was to include those water companies: 1) which are included in the Water Company Group of AUS Utility Reports (July 2007); 2) which have Value Line (Standard Edition) five-year EPS growth rate projections or Reuters consensus five-year EPS growth rate projections; and 3) which have more than 70% of their 2006 operating revenues derived from water operations.

The following eight water companies met the above criteria:

American States Water Co.  
Aqua America, Inc.  
Artesian Resources, Inc.  
California Water Service Group  
Connecticut Water Service inc.  
Middlesex Water Co.  
SJW Corporation  
York Water Co.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research  
Insight Database  
EDGAR Online's I-Metrics Database  
Company Annual Forms 10K

Utilities Services of South Carolina, Inc.  
Capital Structure Based upon Total Permanent Capital for  
the Proxy Group of Eight AUS Utility Reports Water Companies  
for the Years 2002 through 2006

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>5 YEAR AVERAGE</u>
<u>American States Water Co.</u>						
Long-Term Debt	48.61 %	50.46 %	47.75 %	52.05 %	53.40 %	50.45 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	<u>51.39</u>	<u>49.54</u>	<u>52.25</u>	<u>47.95</u>	<u>46.60</u>	<u>49.55</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Aqua America, Inc.</u>						
Long-Term Debt	51.56 %	52.61 %	52.72 %	52.76 %	55.58 %	53.05 %
Preferred Stock	0.09	0.09	0.08	0.07	0.06	0.08
Common Equity	<u>48.35</u>	<u>47.30</u>	<u>47.20</u>	<u>47.17</u>	<u>44.36</u>	<u>46.88</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Artesian Resources Corp.</u>						
Long-Term Debt	59.92 %	61.58 %	60.30 %	60.47 %	55.62 %	59.58 %
Preferred Stock	0.00	0.00	0.00	0.07	0.17	0.05
Common Equity	<u>40.08</u>	<u>38.42</u>	<u>39.70</u>	<u>39.46</u>	<u>44.21</u>	<u>40.37</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>California Water Service Group</u>						
Long-Term Debt	44.58 %	48.07 %	48.66 %	52.41 %	55.36 %	49.82 %
Preferred Stock	0.50	0.61	0.61	0.67	0.77	0.63
Common Equity	<u>54.92</u>	<u>51.32</u>	<u>50.73</u>	<u>46.92</u>	<u>43.87</u>	<u>49.55</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Connecticut Water Service, Inc.</u>						
Long-Term Debt	44.44 %	45.65 %	42.93 %	43.58 %	44.57 %	44.23 %
Preferred Stock	0.44	0.49	0.54	0.57	0.58	0.52
Common Equity	<u>55.12</u>	<u>53.86</u>	<u>56.53</u>	<u>55.85</u>	<u>54.85</u>	<u>55.24</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Middlesex Water Company</u>						
Long-Term Debt	49.98 %	55.68 %	53.99 %	54.05 %	52.24 %	53.19 %
Preferred Stock	1.49	1.70	1.88	2.23	2.41	1.94
Common Equity	<u>48.53</u>	<u>42.62</u>	<u>44.13</u>	<u>43.72</u>	<u>45.35</u>	<u>44.87</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>SJW Corp.</u>						
Long-Term Debt	41.83 %	42.63 %	43.77 %	45.64 %	41.72 %	43.12 %
Preferred Stock	0.01	0.02	0.04	0.05	0.07	0.04
Common Equity	<u>58.16</u>	<u>57.35</u>	<u>56.19</u>	<u>54.31</u>	<u>58.21</u>	<u>56.84</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>York Water Co.</u>						
Long-Term Debt	48.82 %	50.71 %	51.94 %	45.53 %	46.76 %	48.75 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	<u>51.18</u>	<u>49.29</u>	<u>48.06</u>	<u>54.47</u>	<u>53.24</u>	<u>51.25</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>						
Long-Term Debt	48.72 %	50.93 %	50.26 %	50.81 %	50.65 %	50.27 %
Preferred Stock	0.32	0.36	0.39	0.46	0.51	0.41
Common Equity	<u>50.96</u>	<u>48.71</u>	<u>49.35</u>	<u>48.73</u>	<u>48.84</u>	<u>49.32</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Data Base  
Company Annual Forms 10-K

PROXY GROUP OF FOUR VALUE (STANDARD EDITION) LINE WATER COMPANIES  
CAPITALIZATION AND FINANCIAL STATISTICS (1)  
2002 - 2006, INCLUSIVE

	2006	2005	2004	2003	2002	
	(MILLIONS OF DOLLARS)					
<u>CAPITALIZATION STATISTICS</u>						
<u>AMOUNT OF CAPITAL EMPLOYED</u>						
TOTAL PERMANENT CAPITAL	\$860.957	\$773.683	\$719.252	\$628.903	\$541.882	
SHORT-TERM DEBT	<u>\$37.789</u>	<u>\$41.376</u>	<u>\$32.529</u>	<u>\$39.728</u>	<u>\$46.623</u>	
TOTAL CAPITAL EMPLOYED	<u>\$898.745</u>	<u>\$815.059</u>	<u>\$751.781</u>	<u>\$668.632</u>	<u>\$588.505</u>	
<u>INDICATED AVERAGE CAPITAL COST RATES (2)</u>						
TOTAL DEBT	6.65 %	6.39 %	6.28 %	6.36 %	6.39 %	
PREFERRED STOCK	4.81	4.27	3.38	2.63	3.73	
						<u>5 YEAR</u>
						<u>AVERAGE</u>
<u>CAPITAL STRUCTURE RATIOS</u>						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	47.15 %	49.45 %	49.42 %	51.43 %	55.35 %	50.56 %
PREFERRED STOCK	0.19	0.22	0.24	0.40	0.39	0.29
COMMON EQUITY	<u>52.66</u>	<u>50.33</u>	<u>50.34</u>	<u>48.17</u>	<u>44.26</u>	<u>49.15</u>
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	48.56 %	50.93 %	51.13 %	53.69 %	58.05 %	52.47 %
PREFERRED STOCK	0.19	0.22	0.25	0.39	0.38	0.29
COMMON EQUITY	<u>51.25</u>	<u>48.85</u>	<u>48.62</u>	<u>45.92</u>	<u>41.57</u>	<u>47.24</u>
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>FINANCIAL STATISTICS</u>						
<u>FINANCIAL RATIOS - MARKET BASED</u>						
EARNINGS / PRICE RATIO	3.15 %	3.86 %	3.88 %	4.12 %	4.96 %	4.00 %
MARKET / AVERAGE BOOK RATIO	262.50	248.19	222.69	220.49	223.08	235.39
DIVIDEND YIELD	2.15	2.42	2.79	2.91	3.10	2.67
DIVIDEND PAYOUT RATIO	67.47	61.18	71.81	74.09	61.40	67.19
<u>RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY</u>	8.15 %	9.19 %	8.36 %	9.19 %	10.91 %	9.16 %
<u>FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)</u>	3.94 X	4.16 X	4.40 X	3.81 X	3.67 X	4.00 X
<u>FUNDS FROM OPERATIONS / TOTAL DEBT (4)</u>	19.05 %	19.61 %	20.38 %	17.79 %	15.81 %	18.53 %
<u>TOTAL DEBT / TOTAL CAPITAL</u>	48.56 %	50.93 %	51.13 %	53.69 %	58.05 %	52.47 %

See Page 2 for notes.

Proxy Group of Four Value Line (Standard Edition) Water Companies  
Capitalization and Financial Statistics  
2002-2006, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
- (3) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges divided by interest charges.
- (4) Funds from operations (as defined in Note 3) as a percentage of total debt.

Selection Criteria:

The basis of selection was to include those water companies: 1) which are included in the Value Line Investment Survey (Standard Edition).

The following four water companies met the above criteria:

American States Water Co.  
Aqua America, Inc.  
California Water Service Group  
Southwest Water Company

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research  
Insight Database  
EDGAR Online's I-Metrics Database  
Company Annual Forms 10K



Utilities Services of South Carolina, Inc.  
Capital Structure Based upon Permanent Total Capital for  
the Proxy Group of Four Value Line (Standard Edition) Water Companies  
for the Years 2002 through 2006

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>5 YEAR AVERAGE</u>
<u>American States Water Co.</u>						
Long-Term Debt	48.61 %	50.46 %	47.75 %	52.05 %	53.40 %	50.45 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	<u>51.39</u>	<u>49.54</u>	<u>52.25</u>	<u>47.95</u>	<u>46.60</u>	<u>49.55</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Aqua America, Inc.</u>						
Long-Term Debt	51.56 %	52.61 %	52.72 %	52.76 %	55.58 %	53.05 %
Preferred Stock	0.09	0.09	0.08	0.07	0.06	0.08
Common Equity	<u>48.35</u>	<u>47.30</u>	<u>47.20</u>	<u>47.17</u>	<u>44.36</u>	<u>46.88</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>California Water Service Group</u>						
Long-Term Debt	44.58 %	48.07 %	48.66 %	52.41 %	55.36 %	49.82 %
Preferred Stock	0.50	0.61	0.61	0.67	0.77	0.63
Common Equity	<u>54.92</u>	<u>51.32</u>	<u>50.73</u>	<u>46.92</u>	<u>43.87</u>	<u>49.55</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Southwest Water Company</u>						
Long-Term Debt	43.85 %	46.67 %	48.53 %	48.50 %	57.07 %	48.92 %
Preferred Stock	0.15	0.17	0.28	0.85	0.74	0.44
Common Equity	<u>56.00</u>	<u>53.16</u>	<u>51.19</u>	<u>50.65</u>	<u>42.19</u>	<u>50.64</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Proxy Group of Four Value Line (Std. Ed.) Water Companies</u>						
Long-Term Debt	47.15 %	49.45 %	49.42 %	51.43 %	55.35 %	50.56 %
Preferred Stock	0.19	0.22	0.24	0.40	0.39	0.29
Common Equity	<u>52.66</u>	<u>50.33</u>	<u>50.34</u>	<u>48.17</u>	<u>44.26</u>	<u>49.15</u>
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Data Base

Utilities Services of South Carolina, Inc.  
Hypothetical Example of the Inadequacy of  
A DCF Return Rate Related to Book Value  
When Market Value is Greater / Less than Book Value

Line No.		<u>1</u>	<u>2</u>	<u>3</u>
		<u>Market Value</u>	<u>Book Value with Market to Book Ratio of 180%</u>	<u>Book Value with Market to Book Ratio of 80%</u>
1.	Per Share	\$ 24.00	\$ 13.33	\$ 30.00
2.	DCF Cost Rate (1)	10.00%	10.00%	10.00%
3.	Return in Dollars	\$ 2.400	\$ 1.333	\$ 3.000
4.	Dividends (2)	\$ 0.840	\$ 0.840	\$ 0.840
5.	Growth in Dollars	\$ 1.560	\$ 0.493	\$ 2.160
6.	Return on Market Value	10.00%	5.55% (3)	12.50% (4)
7.	Rate of Growth on Market Value	6.50% (5)	2.05% (6)	9.00% (7)

- Notes: (1) Comprised of 3.5% dividend yield and 6.5% growth.  
 (2)  $\$24.00 \times 3.5\% \text{ yield} = \$0.840$ .  
 (3)  $\$1.333 / \$24.00 \text{ market value} = 5.55\%$ .  
 (4)  $\$3.000 / \$24.00 \text{ market value} = 12.50\%$ .  
 (5) Expected rate of growth per market based DCF model.  
 (6) Actual rate of growth when DCF cost rate is applied to book value ( $\$1.333$  possible earnings -  $\$0.840$  dividends =  $\$0.493$  for growth /  $\$24.00$  market value = 2.05%).  
 (7) Actual rate of growth when DCF cost rate is applied to book value ( $\$3.000$  possible earnings -  $\$0.840$  dividends =  $\$2.160$  for growth /  $\$24.00$  market value = 9.00%).

Utilities Services of South Carolina, Inc.  
Indicated Common Equity Cost Rate Through Use of the  
Single Stage Discounted Cash Flow Model for  
the Proxy Group of Eight AUS Utility Reports Water Companies and the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

Based upon Historical and Projected Growth in DPS, EPS, and BR+SV

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	Average Dividend Yield (1)	Dividend Growth Component (2)	Adjusted Dividend Yield (3)	Growth Rate (4)	Indicated Common Equity Cost Rate (5)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>					
American States Water Co	2.7 %	0.1 %	2.8 %	5.0 %	7.8 %
Aqua America, Inc	2.1	0.1	2.2	7.7	9.9
Artesian Resources Corp	2.9	0.1	3.0	6.0	9.0
California Water Service Group	3.2	0.1	3.3	4.6	7.9
Connecticut Water Service Inc	3.6	0.1	3.7	5.2	8.9
Middlesex Water Company	3.7	0.1	3.8	3.8	7.6
SJW Corp	1.9	0.1	2.0	7.7	9.7
York Water Co	2.7	0.1	2.8	6.0	8.8
Average	<u>2.9 %</u>	<u>0.1 %</u>	<u>3.0 %</u>	<u>5.8 %</u>	<u>9.3 % (6)</u>
 <u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>					
American States Water Co	2.7 %	0.1 %	2.8 %	5.0 %	7.8 %
Aqua America, Inc	2.1	0.1	2.2	7.7	9.9
California Water Service Group	3.2	0.1	3.3	4.6	7.9
Southwest Water Company	1.8	0.1	1.9	7.6	9.5
Average	<u>2.5 %</u>	<u>0.1 %</u>	<u>2.6 %</u>	<u>6.2 %</u>	<u>9.7 % (6)</u>

Based upon Projected Growth in EPS

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	Average Dividend Yield (1)	Dividend Growth Component (2)	Adjusted Dividend Yield (3)	Growth Rate (4)	Indicated Common Equity Cost Rate (5)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>					
American States Water Co	2.7 %	0.1 %	2.8 %	7.0 %	9.8 %
Aqua America, Inc	2.1	0.1	2.2	8.9	11.1
Artesian Resources Corp	2.9	0.1	3.0	8.0	11.0
California Water Service Group	3.2	0.1	3.3	7.4	10.7
Connecticut Water Service Inc	3.6	0.2	3.8	10.0	13.8
Middlesex Water Company	3.7	0.1	3.8	5.5	9.3
SJW Corp	1.9	0.1	2.0	10.0	12.0
York Water Co	2.7	0.1	2.8	7.0	9.8
Average	<u>2.9 %</u>	<u>0.1 %</u>	<u>3.0 %</u>	<u>8.0 %</u>	<u>10.3 % (6)</u>
 <u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>					
American States Water Co	2.7 %	0.1 %	2.8 %	7.0 %	9.8 %
Aqua America, Inc	2.1	0.1	2.2	8.9	11.1
California Water Service Group	3.2	0.1	3.3	7.4	10.7
Southwest Water Company	1.8	0.1	1.9	10.5	12.4
Average	<u>2.5 %</u>	<u>0.1 %</u>	<u>2.6 %</u>	<u>8.5 %</u>	<u>10.5 % (6) (7)</u>

Conclusion

Proxy Group of Eight AUS Utility  
Reports Water Companies 9.8 %

Proxy Group of Four Value Line  
(Standard Edition) Water  
Companies 10.1 %

Notes:

- (1) From Schedule PMA-7 of this Exhibit
- (2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from page 1 of Schedule PMA-9 of this Exhibit) x Column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Co,  $2.7\% \times (1/2 \times 5.0\%) = 0.1\%$
- (3) Column 1 + Column 2
- (4) From page 1 Schedule PMA-9 of this Exhibit
- (5) Column 3 + Column 4
- (6) Includes only those indicated common equity cost rates which are greater than 8.6%, i.e. 200 basis points above the prospective yield on A rated Moody's public utility bonds of 6.6% (from page 1 of Schedule PMA-10 of this Exhibit)
- (7) Excludes Connecticut Water Service Inc's result of 13.8% and Southwest Water Company's result of 12.4%, because in Ms. Ahern's opinion it is unlikely that a water company would be authorized a return rate on common equity of 12.0% or greater based upon the DCF model in the immediate future

Utilities Services of South Carolina, Inc.  
Derivation of Dividend Yield for Use in the  
Discounted Cash Flow Model

	Dividend Yield		
	Spot (7/10/2007) (1)	Average of Last 3 Months (2)	Average Dividend Yield (3)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>			
American States Water Co.	2.7 %	2.6 %	2.7 %
Aqua America, Inc.	2.1	2.0	2.1
Artesian Resources Corp.	3.5	2.2	2.9
California Water Service Group	3.2	3.1	3.2
Connecticut Water Service Inc.	3.5	3.6	3.6
Middlesex Water Company	3.7	3.6	3.7
SJW Corp.	1.9	1.8	1.9
York Water Co.	2.7	2.6	2.7
Average	<u>2.9 %</u>	<u>2.7 %</u>	<u>2.9 %</u>
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>			
American States Water Co.	2.7 %	2.6 %	2.7 %
Aqua America, Inc.	2.1	2.0	2.1
California Water Service Group	3.2	3.1	3.2
Southwest Water Company	1.8	1.8	1.8
Average	<u>2.5 %</u>	<u>2.4 %</u>	<u>2.5 %</u>

- Notes: (1) The spot dividend yield is the current annualized dividend per share divided by the spot market price on 7/10/07.
- (2) The average 3-month dividend yield was computed by relating the indicated annualized dividend rate and market price on the last trading day of each of the three months ended June 30, 2007.
- (3) Equal weight has been given to the 3-month average and spot dividend yield. This provides recognition of current conditions, but does not place undue emphasis thereon.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus  
Research Insight Database  
EDGAR Online's I-Metrics Database  
finance.yahoo.com

Utilities Services of South Carolina, Inc.  
Current Institutional Holdings (1) and Individual Holdings (2) for  
the Proxy Group of Eight AUS Utility Reports Water Companies,  
the Proxy Group of Four Value Line (Standard Edition) Water Companies

	<u>1</u>	<u>2</u>
	July 2007 Percentage of Institutional Holdings	July 2007 Percentage of Individual Holdings (1)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>		
American States Water Co.	54.8 %	45.2 %
Aqua America	43.5	56.5
Artesian Resources Corp.	16.1	83.9
California Water Service Group	43.0	57.0
Connecticut Water Service Inc.	18.5	81.5
Middlesex Water Co.	24.4	75.6
SJW Corp.	42.6	57.4
York Water Co.	<u>10.9</u>	<u>89.1</u>
Average	<u>31.7 %</u>	<u>68.3 %</u>
 <u>Proxy Group of Four Value Line Water Companies</u>		
American States Water Co.	54.8 %	45.2 %
Aqua America	43.5	56.5
California Water Service Group	43.0	57.0
Southwest Water Company	<u>50.1</u>	<u>49.9</u>
Average	<u>47.9 %</u>	<u>52.1 %</u>

Notes (1) (1 - column 1).

Source of Information: today.reuters.com, updated July 11, 2007

Utilities Services of South Carolina, Inc.  
Historical and Projected Growth

	1	2	3	4	5	6	7	8	9	10	11	12	13
	Value Line Historical Five Year Growth Rate (1)		Five Year Historical BR + SV (2)	Value Line Projected 2003-05 to 2009-11 Growth Rate (1)		Reuters Mean Consensus Projected Five Year Growth Rate	Average Projected Five Year Growth Rate in EPS (3)	Projected Five Year BR + SV (4)	Range of Growth Rates			Average of all Growth Rates	Average of Midpoint and Average of all Growth Rates (9)
	OPS	EPS		OPS	EPS	EPS	No. of Est.		Low	High	Midpoint		
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>													
American States Water Co.	1.0 %	(2.5) %	4.4 %	3.0 %	9.0 %	5.0	(1)	7.0 %	7.1 %	1.0 % (8)	9.0 % (8)	5.0 %	4.9 % (8)
Aqua America, Inc.	6.5	8.5	7.9	9.5	7.5	10.3	(6)	8.9	4.6	4.6	10.3	7.5	7.8
Artesian Resources Corp.	3.8 (5)	6.3 (5)	5.7	NA	NA	8.0	(2)	8.0	NA	3.8	8.0	5.9	6.0
California Water Service Group	1.0	(0.5)	4.9	1.0	6.5	8.2	(5)	7.4	5.8	1.0 (8)	8.2	4.6	4.6 (8)
Connecticut Water Service Inc.	1.0	(0.3)	3.4	NA	NA	10.0	(1)	10.0	NA	1.0 (8)	10.0	5.5	4.8 (8)
Middlesex Water Company	2.0	3.5	4.2	NA	NA	5.5	(2)	5.5	NA	2.0	5.5	3.8	3.8
SJW Corp.	5.5	7.5	7.1	NA	NA	10.0	(1)	10.0	NA	5.5	10.0	7.8	7.7
York Water Co.	5.2 (5)	6.9 (5)	4.7	NA	NA	7.0	(2)	7.0	NA	4.7	7.0	5.9	6.0
Average	3.3 %	6.5 % (8)	5.3 %	4.5 %	7.7 %	8.0 %		8.0 %	5.8 %	3.0 %	8.5 %	5.8 %	5.8 %
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>													
American States Water Co.	1.0 %	(2.5) %	4.4 %	3.0 %	9.0 %	5.0 %	(1)	7.0 %	7.1 %	1.0 % (8)	9.0 % (8)	5.0 %	4.9 % (8)
Aqua America, Inc.	6.5	8.5	7.9	9.5	7.5	10.3	(6)	8.9	4.6	4.6	10.3	7.5	7.8
California Water Service Group	1.0	(0.5)	4.9	1.0	6.5	8.2	(5)	7.4	5.8	1.0 (8)	8.2 (8)	4.6	4.6 (8)
Southwest Water Company	10.0	1.5	11.9	9.5	11.0	10.0	(3)	10.5	5.2	1.5	11.9	6.7	8.4
Average	4.6 %	5.0 % (8)	7.3 %	5.8 %	8.5 %	8.4 %		8.5 %	5.7 %	2.0 %	9.9 %	6.0 %	6.2 %

- Notes: (1) As shown on pages 6 through 15 of this Schedule. Historical growth rates are five-year compound growth rates.  
 (2) From page 2 of this Schedule.  
 (3) Average of Columns 5 and 6.  
 (4) From page 6 of this Schedule.  
 (5) Calculated using the same methodology as Value Line Investment Survey, i.e., three-year base periods ending 2005.  
 (6) Average of Columns 1, 2, 3, 4, 5, 6, and 8.  
 (7) From Column 7.  
 (8) Excludes negatives.  
 (9) Average of Column 11 and Column 12.

Source of Information: Value Line Investment Survey, April 27, 2007  
 stocks.us.reuters.com, July 11, 2007

Utilities Services of South Carolina, Inc.  
Calculation of Historical BR + SV

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	<u>BR (1)</u>	<u>S Factor (2)</u>	<u>V Factor (3)</u>	<u>SV (4)</u>	<u>BR + SV (5)</u>
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>					
American States Water Co.	3.2 %	2.5 %	47.1 %	1.2 %	4.4 %
Aqua America, Inc.	5.1	4.0	69.5	2.8	7.9
Artesian Resources Corp.	2.7	6.2	47.6	3.0	5.7
California Water Service Group	1.5	6.5	52.6	3.4	4.9
Connecticut Water Service Inc.	2.5	1.6	58.8	0.9	3.4
Middlesex Water Company	1.1	5.4	57.0	3.1	4.2
SJW Corp.	7.1	0.0	50.0	0.0	7.1
York Water Co.	2.4	3.5	66.8	2.3	4.7
Average	<u>3.2 %</u>	<u>3.7 %</u>	<u>56.2 %</u>	<u>2.1 %</u>	<u>5.3 %</u>
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>					
American States Water Co.	3.2 %	2.5 %	47.1 %	1.2 %	4.4 %
Aqua America, Inc.	5.1	4.0	69.5	2.8	7.9
California Water Service Group	1.5	6.5	52.6	3.4	4.9
Southwest Water Company	3.8	15.2	53.3	8.1	11.9
Average	<u>3.4 %</u>	<u>7.1 %</u>	<u>55.6 %</u>	<u>3.9 %</u>	<u>7.3 %</u>

- Notes: (1) From column 6, page 3 of this Schedule.  
(2) From column 12, page 4 of this Schedule.  
(3) From column 7, page 5 of this Schedule.  
(4) Column 2 \* column 3.  
(5) Column 1 + column 4

Utilities Services of South Carolina, Inc.  
Historical Internal Growth Rate (1), i.e., BR, for  
the Proxy Group of Eight AUS Utility Reports Water Companies, the  
Proxy Group of Four Value Line (Standard Edition) Water Companies  
for the Years 2002-2006

	1	2	3	4	5	6
	2006	2005	2004	2003	2002	Five-Year Average 2000-2006 Internal Growth Rate, i.e., BR
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>						
<u>American States Water Co.</u>						
Common Equity Return Rate	8.43 %	10.38 %	7.99 %	5.59 %	9.83 %	
Retention Ratio	32.40	43.59	25.17	(12.98)	35.04	
Internal Growth Rate (1)	2.73	4.52	2.01	(0.73)	3.44	3.2 % (2)
<u>Aqua America, Inc.</u>						
Common Equity Return Rate	10.61 %	11.69 %	11.39 %	12.30 %	13.92 %	
Retention Ratio	36.93	43.90	42.75	43.61	45.22	
Internal Growth Rate (1)	3.92	5.13	4.87	5.36	6.29	5.1
<u>Artesian Resources Corp.</u>						
Common Equity Return Rate	10.15 %	8.93 %	8.18 %	7.41 %	9.67 %	
Retention Ratio	38.82	31.08	25.80	19.24	34.96	
Internal Growth Rate (1)	3.94	2.78	2.11	1.43	3.38	2.7
<u>California Water Service Group</u>						
Common Equity Return Rate	7.56 %	9.31 %	9.72 %	8.68 %	9.56 %	
Retention Ratio	14.21	25.81	22.97	8.79	10.13	
Internal Growth Rate (1)	1.07	2.40	2.23	0.76	0.97	1.5
<u>Connecticut Water Service Inc.</u>						
Common Equity Return Rate	7.02 %	7.84 %	10.93 %	11.23 %	11.60 %	
Retention Ratio	(5.16)	4.98	29.02	28.82	28.20	
Internal Growth Rate (1)	(0.36)	0.39	3.17	3.24	3.27	2.5 (2)
<u>Middlesex Water Company</u>						
Common Equity Return Rate	8.55 %	8.45 %	9.37 %	8.17 %	10.10 %	
Retention Ratio	16.35	6.49	9.95	(6.51)	13.33	
Internal Growth Rate (1)	1.40	0.55	0.93	(0.53)	1.35	1.1 (2)
<u>SJW Corp.</u>						
Common Equity Return Rate	18.19 %	11.48 %	11.27 %	11.68 %	9.40 %	
Retention Ratio	72.66	55.23	52.90	52.55	40.94	
Internal Growth Rate (1)	13.22	6.34	5.96	6.14	3.85	7.1
<u>York Water Co.</u>						
Common Equity Return Rate	10.52 %	11.85 %	12.17 %	11.66 %	10.37 %	
Retention Ratio	20.87	24.70	25.86	21.04	12.32	
Internal Growth Rate (1)	2.20	2.93	3.15	2.45	1.28	2.4
Average						3.2 %
<u>Proxy Group of Four Value Line (Standard Edition) Water</u>						
<u>American States Water Co.</u>						
Common Equity Return Rate	8.43 %	10.38 %	7.99 %	5.59 %	9.83 %	
Retention Ratio	32.40	43.59	25.17	(12.98)	35.04	
Internal Growth Rate (1)	2.73	4.52	2.01	(0.73)	3.44	3.2 % (2)
<u>Aqua America, Inc.</u>						
Common Equity Return Rate	10.61 %	11.69 %	11.39 %	12.30 %	13.92 %	
Retention Ratio	36.93	43.90	42.75	43.61	45.22	
Internal Growth Rate (1)	3.92	5.13	4.87	5.36	6.29	5.1
<u>California Water Service Group</u>						
Common Equity Return Rate	7.56 %	9.31 %	9.72 %	8.68 %	9.56 %	
Retention Ratio	14.21	25.81	22.97	8.79	10.13	
Internal Growth Rate (1)	1.07	2.40	2.23	0.76	0.97	1.5
<u>Southwest Water Company</u>						
Common Equity Return Rate	5.99 %	5.38 %	4.40 %	10.20 %	10.32 %	
Retention Ratio	46.26	42.00	21.88	64.23	64.02	
Internal Growth Rate (1)	2.77	2.26	0.96	6.55	6.61	3.8
Average						3.4 %

Notes: (1) The internal growth rate is calculated by multiplying the common equity return rate by the retention ratio (100% minus the dividend payout ratio). All data are on a consolidated basis.  
(2) Excludes negatives

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database



Utilities Services of South Carolina, Inc.  
Calculation of Five Year Average Growth in Common Shares Outstanding (1), i.e., S Factor

	1	2	3	4	5	6	7	8	9	10	11	12
	2001 Common Shares Outstanding (1)	01-02 Growth	2002 Common Shares Outstanding (1)	02-03 Growth	2003 Common Shares Outstanding (1)	03-04 Growth	2004 Common Shares Outstanding (1)	04-05 Growth	2005 Common Shares Outstanding (1)	05-06 Growth	2006 Common Shares Outstanding (1)	Five Year Average Common Share Growth
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>												
American States Water Co.	15,120	0.4 %	15,181	0.2 %	15,212	10.1 %	16,752	0.3 %	16,798	1.5 %	17,049	2.5 %
Aqua America, Inc.	113,977	(0.7)	113,195	9.1	123,452	3.0	127,180	1.4	128,969	2.6	132,325	4.0 (2)
Artesian Resources Corp.	4,590	26.2	5,794	1.0	5,852	1.4	5,934	1.5	6,021	1.1	6,086	6.2
California Water Service Group	15,182	0.0	15,182	11.5	16,932	8.5	18,367	0.1	18,390	12.3	20,657	6.5
Connecticut Water Service Inc.	7,649	3.8	7,940	0.3	7,967	0.9	8,035	1.7	8,170	1.2	8,270	1.6
Middlesex Water Company	10,168	1.8	10,356	2.0	10,567	7.5	11,359	2.0	11,584	13.7	13,168	5.4
SJW Corp.	18,270	0.0	18,270	0.0	18,270	0.0	18,270	0.0	18,270	0.1	18,282	0.0
York Water Co.	9,462	0.9	9,547	0.9	9,629	7.3	10,331	0.7	10,400	7.7	11,201	3.5
Average												3.7 %
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>												
American States Water Co.	15,120	0.4 %	15,181	0.2 %	15,212	10.1 %	16,752	0.3 %	16,798	1.5 %	17,049	2.5 %
Aqua America, Inc.	113,977	(0.7)	113,195	9.1	123,452	3.0	127,180	1.4	128,969	2.6	132,325	4.0 (2)
California Water Service Group	15,182	0.0	15,182	11.5	16,932	8.5	18,367	0.1	18,390	12.3	20,657	6.5
Southwest Water Company	14,174	(3.6)	13,662	18.4	16,173	25.9	20,365	3.8	21,129	12.7	23,802	15.2 (2)
Average												7.1 %

Notes: (1) Year-end shares outstanding.  
(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database

Utilities Services of South Carolina, Inc.  
Calculation of the Premium/Discount of a  
Company's Stock Price Relative to its Book Value, i.e., V Factor

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
	<u>2002 Market to Book Ratio (1)</u>	<u>2003 Market to Book Ratio (1)</u>	<u>2004 Market to Book Ratio (1)</u>	<u>2005 Market to Book Ratio (1)</u>	<u>2006 Market to Book Ratio (1)</u>	<u>Five Year Average Market to Book Ratio</u>	<u>V Factor (2)</u>
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>							
American States Water Co.	180.6 %	180.3 %	164.3 %	191.5 %	228.9 %	189.1 %	47.1 %
Aqua America, Inc.	289.8	295.6	291.4	383.8	376.5	327.4	69.5
Artesian Resources Corp.	162.0	184.5	192.8	211.1	203.6	190.8	47.6
California Water Service Group	181.6	199.8	212.6	231.6	229.0	210.9	52.6
Connecticut Water Service Inc.	266.2	265.0	250.5	223.1	207.7	242.5	58.8
Middlesex Water Company	232.9	247.9	241.7	238.9	200.9	232.5	57.0
SJW Corp.	167.3	157.2	178.2	210.6	286.5	200.0	50.0
York Water Co.	281.5	286.9	287.5	311.0	340.0	301.4	66.8
Average						<u>236.8 %</u>	<u>56.2 %</u>
<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>							
American States Water Co.	180.6 %	180.3 %	164.3 %	191.5 %	228.9 %	189.1 %	47.1 %
Aqua America, Inc.	289.8	295.6	291.4	383.8	376.5	327.4	69.5
California Water Service Group	181.6	199.8	212.6	231.6	229.0	210.9	52.6
Southwest Water Company	240.3	206.2	222.5	185.8	215.6	214.1	53.3
Average						<u>235.4 %</u>	<u>55.6 %</u>

Notes: (1) Market to Book Ratio = average of yearly high-low market price divided by the average of beginning and ending year's balance of book common equity per share.  
(2)  $(1 - (100 / \text{column 6}))$ .

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database  
EDGAR Online's I-Metrics Database  
Company Annual Forms 10-K

Utilities Services of South Carolina, Inc.  
Calculation of Projected BR + SV

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
	Common Shares Outstanding (1) (000,000)		Projected 2010 - 2012 (1)								
	Actual 2006	Projected 2010-2012	S Factor (2)	High Stock Price	Low Stock Price	Book Value	Average Stock Price (3)	V Factor (4)	SV (5)	BR (6)	BR + SV (7)
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>											
American States Water Co.	17.05	22.00	5.2 %	50.00	35.00	22.25	\$42.50	47.6 %	2.5 %	4.6 %	7.1 %
Aqua America, Inc.	132.33	140.00	1.1	30.00	19.00	9.30	24.50	62.0	0.7	3.9	4.6
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Service Group	20.66	23.00	2.2	50.00	40.00	21.30	45.00	52.7	1.2	4.6	5.8
Connecticut Water Service Inc.	8.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Middlesex Water Company	13.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SJW Corp.	18.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Co.	11.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average			<u>2.8 %</u>					<u>54.1 %</u>	<u>1.5 %</u>	<u>4.4 %</u>	<u>5.8 %</u>
<u>Proxy Group of Four Value Line (Standard Edition) Water</u>											
American States Water Co.	17.05	22.00	5.2 %	\$50.00	\$35.00	\$22.25	\$42.50	47.6 %	2.5 %	4.6 %	7.1 %
Aqua America, Inc.	132.33	140.00	1.1	30.00	19.00	9.30	24.50	62.0	0.7	3.9	4.6
California Water Service Group	20.66	23.00	2.2	50.00	40.00	21.30	45.00	52.7	1.2	4.6	5.8
Southwest Water Company	23.80	30.00	4.7	18.00	12.00	10.50	15.00	<u>30.0</u>	<u>1.4</u>	<u>3.8</u>	<u>5.2</u>
Average			<u>3.3 %</u>					<u>48.1 %</u>	<u>1.5 %</u>	<u>4.2 %</u>	<u>5.7 %</u>

NA = Not Available

- Notes: (1) From pages 8 through 15 of this Schedule.  
(2) The S Factor is the six or five year compound growth rate between the 2006 and 2011 (mid-point of 2010-2012 projection) common shares outstanding.  
(3) The Average Stock Price is the average of column 4 and column 5.  
(4)  $(1 - (\text{column 6} / \text{column 7}))$   
(5) Column 3 \* column 8.  
(6) From page 7, column 14 of this Schedule.  
(7) Column 9 + column 10.

Source of Information: Value Line Investment Survey, April 27, 2007

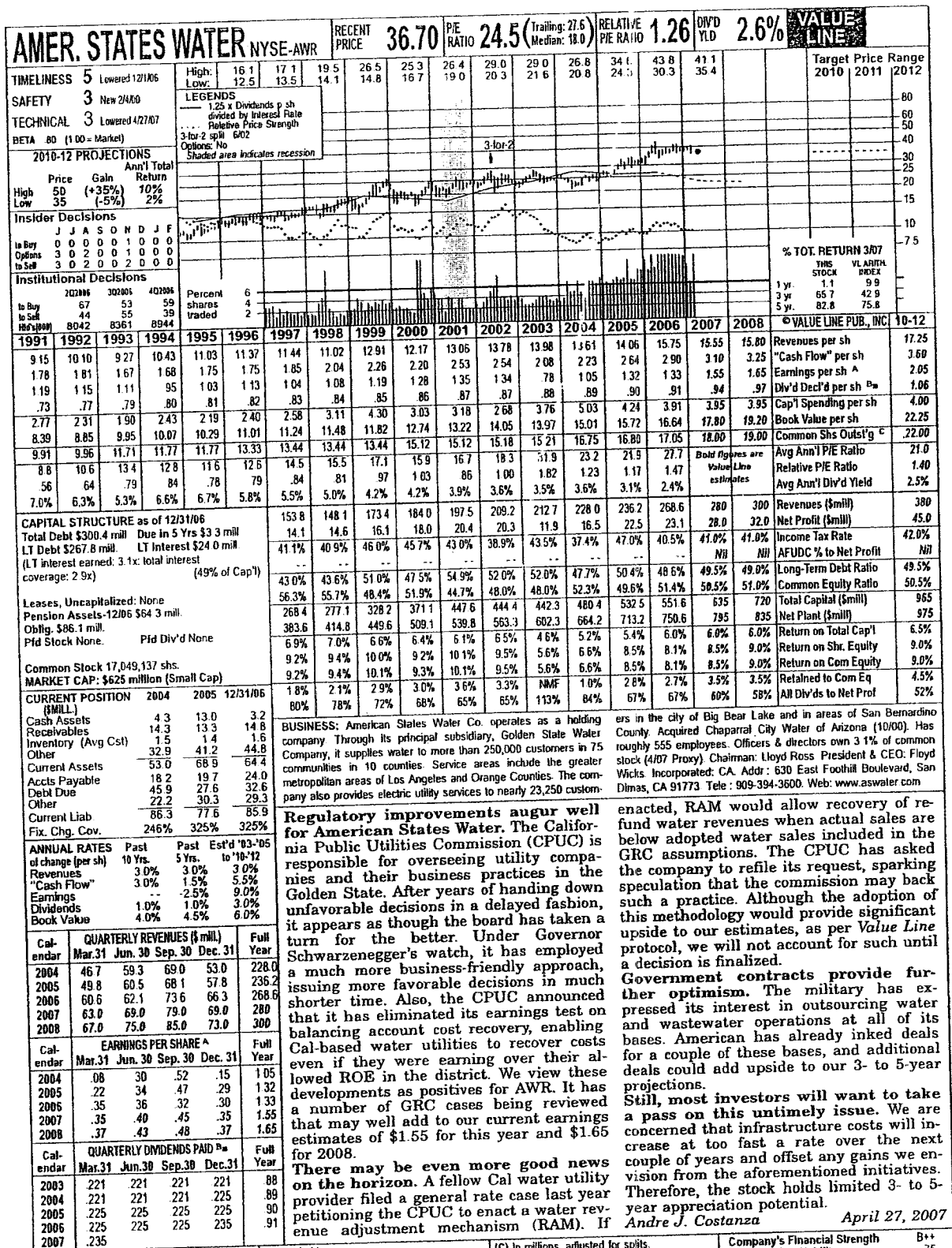
Utilities Services of South Carolina, Inc.  
Projected Internal Growth Rate

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
2008			2010-2012			Annual Common Equity Growth Rate (4)	ROE Adjustment Factor (5)	Return on Common Equity (1)	Return on Average Common Equity (6)	2010-2012			Projected Internal Growth (8)	
Common Equity (%) (1)	Total Capital (\$ mil) (1)	Common Equity (\$ mil) (2)	Common Equity (%) (1)	Total Capital (\$ mil) (1)	Common Equity (\$ mil) (3)					EPS (1)	DPS (1)	Retention Ratio (7)		
Proxy Group of Eight AUS Utility Regions Water Companies														
American States Water Co.	51.40 %	\$551.60	\$283.52	50.50 %	\$965.00	\$487.33	11.44 %	1.05 %	9.00 %	9.45 %	\$2.05	\$1.06	48.3 %	4.6 %
Aqua America, Inc.	49.20	1,873.30	921.66	49.50	2,550.00	1,262.25	6.49	1.03	11.50	11.85	1.05	0.70	33.3	3.9
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Service Group	56.20	673.60	378.56	51.00	965.00	492.15	5.39	1.03	10.00	10.30	2.15	1.20	44.2	4.6
Connecticut Water Service Inc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Middlesex Water Company	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SJW Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Co.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.4 %
Average														
Proxy Group of Four Value Line (Standard Edition) Water Companies														
American States Water Co.	51.40 %	\$551.60	\$283.52	50.50 %	\$965.00	\$487.33	11.44 %	1.05 %	9.00 %	9.45 %	\$2.05	\$1.06	48.3 %	4.6 %
Aqua America, Inc.	49.20	1,873.30	921.66	49.50	2,550.00	1,262.25	6.49	1.03	11.50	11.85	1.05	0.70	33.3	3.9
California Water Service Group	56.20	673.60	378.56	51.00	965.00	492.15	5.39	1.03	10.00	10.30	2.15	1.20	44.2	4.6
Southwest Water Company	56.40	295.10	166.44	58.50	560.00	316.40	13.71	1.06	7.00	7.42	0.70	0.34	51.4	3.0
Average														

NA = Not Available

- Notes:
- (1) From pages 8 through 15 of this Schedule.
  - (2) Column 1 \* column 2.
  - (3) Column 4 \* column 5.
  - (4) Five year compound growth rate in common equity from 2006 to 2010-2012 or  $\left(\frac{\text{column 6} / \text{column 3}}{1/5} - 1\right)$ .
  - (5)  $2 * ((1 + \text{column 7}) / (2 + \text{column 7}))$ .
  - (6) Column 8 \* column 9.
  - (7)  $1 - (\text{column 12} / \text{column 11})$ .
  - (8) Column 10 \* column 13.

Source of Information: Value Line Investment Survey, April 27, 2007



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AQUA AMERICA NYSE-WTR			RECENT PRICE	23.37	P/E RATIO	29.6	(Trailing: 33.4 Median: 23.0)	RELATIVE P/E RATIO	1.53	DIV'D YLD	2.1%	VALUE LINE							
TIMELINESS	4	Raised 3/9/07	High: 5.7	5.7	8.5	11.5	11.5	12.0	14.8	15.0	16.8	18.5	29.2	29.8	24.0	20.5	Target Price	Range	
SAFETY	3	Lowered 8/1/03	Low: 3.9	3.9	4.4	7.2	7.6	6.3	9.4	9.6	11.8	14.2	17.5	20.1	20.5		2010	2011	
TECHNICAL	3	Lowered 12/22/06	LEGENDS										4-for-3					2012	
BETA	90	(1.00 = Market)	150 x Dividends p.sh. divided by Interest Rate										5-for-4						
2010-12 PROJECTIONS			Relative Price Strength										5-for-4						
Price	30	Gain	Ang'l Total	3-for-2 split 7/96										5-for-4					
High	30	(+30%)	9%	4-for-3 split 1/98										5-for-4					
Low	19	(-20%)	-2%	5-for-4 split 12/00										5-for-4					
Insider Decisions			5-for-4 split 12/03										5-for-4						
J	0	0	0	Options: Yes										5-for-4					
A	0	0	0	Options: No										5-for-4					
S	0	0	0	Shaded area indicates recession										5-for-4					
O	0	0	0											5-for-4					
N	0	0	0											5-for-4					
D	0	0	0											5-for-4					
J	0	0	0											5-for-4					
F	0	0	0											5-for-4					
Institutional Decisions													5-for-4						
2020M6	3020M6	4020M6	Percent											5-for-4					
131	119	122	6											5-for-4					
105	84	91	2											5-for-4					
40896	44837	51814												5-for-4					
1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	10-12	
2.14	1.82	1.70	1.82	1.84	1.86	2.02	2.09	2.41	2.46	2.70	2.85	2.97	3.48	3.85	4.03	4.35	4.65	Revenues per sh	5.35
45	39	42	42	47	50	56	61	72	76	86	94	96	109	121	126	140	1.50	"Cash Flow" per sh	1.80
25	24	24	26	29	30	34	40	42	47	51	54	57	64	71	70	80	.80	Earnings per sh	1.05
19	20	21	21	22	23	24	26	27	28	30	32	35	37	40	44	48	.55	Div'd Decl'd per sh	.70
54	60	47	46	52	48	58	82	90	116	109	120	132	154	184	205	210	2.15	Cap'l Spending per sh	2.30
2.07	2.09	2.29	2.41	2.46	2.69	2.84	3.21	3.42	3.85	4.15	4.36	5.34	5.89	6.30	6.96	7.15	7.45	Book Value per sh	9.30
41.42	51.20	59.40	59.77	63.74	65.75	67.47	72.20	106.80	111.82	113.97	113.19	123.45	127.18	128.97	132.33	134.00	136.00	Common Shs Outst'g	140.00
10.8	12.5	14.4	13.5	12.0	15.6	17.8	22.5	21.2	18.2	23.6	23.6	24.5	25.1	31.8	34.7	34.7	34.7	Avg Ann'l P/E Ratio	23.0
69	76	85	89	80	98	103	117	121	118	121	129	140	133	169	188	188	188	Relative P/E Ratio	1.55
7.2%	6.8%	5.9%	6.0%	6.2%	4.9%	3.9%	2.9%	3.0%	3.3%	2.5%	2.5%	2.5%	2.3%	1.8%	1.9%	1.9%	1.9%	Avg Ann'l Div'd Yield	2.9%
CAPITAL STRUCTURE as of 12/31/06			136.2	151.0	257.3	275.5	307.3	322.0	367.2	442.0	496.8	533.5	580	630	630	630	630	Revenues (\$mill)	750
Total Debt \$1102.1 mill Due in 5 Yrs \$143.3 mill			23.2	28.8	45.0	50.7	58.5	62.7	67.3	80.0	91.2	92.0	105	105	105	105	105	Net Profit (\$mill)	150
LT Debt \$951.7 mill LT Interest \$55.0 mill			40.6%	40.5%	38.4%	38.9%	39.3%	38.5%	39.3%	39.4%	38.4%	39.6%	39.5%	39.0%	39.0%	39.0%	39.0%	Income Tax Rate	39.0%
(LT interest earned: 3.6x; total interest coverage: 3.4x)			54.4%	52.7%	52.9%	52.0%	52.2%	54.2%	51.4%	50.0%	52.0%	50.8%	51.0%	52.0%	52.0%	52.0%	52.0%	AFUDC % to Net Profit	2.0%
Pension Assets-12/06 \$126.5 mill			44.8%	46.6%	46.7%	47.8%	47.7%	45.8%	48.6%	50.0%	48.0%	49.2%	49.0%	48.0%	48.0%	48.0%	48.0%	Long-Term Debt Ratio	51.0%
Pfd Stock None			427.2	496.6	782.7	901.1	990.4	1076.2	1355.7	1497.3	1690.4	1873.3	1970	2110	2110	2110	2110	Common Equity Ratio	49.5%
Common Stock 132,325,690 shares			534.5	609.8	1135.4	1251.4	1368.1	1490.8	1824.3	2069.8	2280.0	2506.0	2700	2850	2850	2850	2850	Net Plant (\$mill)	3500
MARKET CAP: \$3.1 billion (Mid Cap)			7.4%	7.6%	7.6%	7.4%	7.8%	7.6%	6.4%	6.7%	6.9%	6.5%	7.0%	7.0%	7.0%	7.0%	7.0%	Return on Total Cap'l	7.5%
CURRENT POSITION			11.9%	12.3%	12.2%	11.7%	12.3%	12.7%	10.2%	10.7%	11.2%	10.0%	11.0%	11.5%	11.5%	11.5%	11.5%	Return on Shr. Equity	11.5%
(MILL)			12.0%	12.4%	12.3%	11.7%	12.4%	12.7%	10.2%	10.7%	11.2%	10.0%	11.0%	11.5%	11.5%	11.5%	11.5%	Return on Com Equity	11.5%
Cash Assets			3.6%	4.5%	4.3%	4.7%	5.1%	5.2%	4.2%	4.6%	4.9%	3.7%	4.0%	4.5%	4.5%	4.5%	4.5%	Retained to Com Eq	4.0%
Receivables			70%	64%	65%	60%	59%	59%	59%	57%	56%	63%	63%	64%	64%	64%	64%	All Div'ds to Net Prof	66%
Inventory (AvgCst)			BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately 2.8 million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Divested three of four non-water businesses in '91; telemarketing group in '93; and others. Acquired AquaSource, 7/03; Consumers Water, 4/99; and																
Other			Island. Although the acquisition strategy makes sense, it probably adds some risk. Acquired facilities can require expensive capital improvements to qualify for rate increases. Also, expenses, such as depreciation, can rise, before being fully offset by higher revenue.																
Current Assets			We expect earnings to advance at about 6%-10% annually, on average, for the next few years. We are leaving our earnings estimate for 2007 unchanged, and are introducing an estimate of \$0.90 per diluted share for 2008 at this time. The company should be able to improve efficiency at some of its recently purchased businesses. Results should also benefit from moderating chemical prices and energy utility costs.																
Acc'ts Payable			These shares are ranked 4 (Below Average) for Timeliness. Further, our current projections indicate the issue offers little, if any, appreciation potential for the next 3 to 5 years. The dividend payout remains at about 63%, which is considerable. But the yield on this stock is not too attractive and thus offers limited downside price protection for investors.																
Debt Due			Adam Rosner																
Other			April 27, 2007																
Current Liab.																			
Fix. Chg. Cov.																			
ANNUAL RATES of change (per sh)																			
Past 10 Yrs																			
Past 5 Yrs																			
Est'd '03-'05																			
Revenues																			
"Cash Flow"																			
Earnings																			
Dividends																			
Book Value																			
QUARTERLY REVENUES (\$mill)																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2004	99.8	106.5	120.3	115.4	442.0														
2005	114.0	123.1	136.8	122.9	496.8						<								
2006	118.0	131.7	147.0	136.8	533.5						<								
2007	130	150	160	140	580						<								
2008	140	160	180	150	630						<								
EARNINGS PER SHARE																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2004	13	14	20	17	.64														
2005	15	17	22	17	.71														
2006	13	17	21	19	.70														
2007	16	22	22	20	.80														
2008	20	24	24	22	.90														
QUARTERLY DIVIDENDS PAID																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2003	.084	.084	.084	.09	.34														
2004	.09	.09	.09	.098	.37														
2005	.098	.098	.098	.107	.40														
2006	.107	.107	.115	.115	.44														
2007	.115																		

CALIFORNIA WATER NYSE-CWT										RECENT PRICE 40.72		P/E RATIO 25.9 (Trading: 30.4 Median: 19.0)		REL. DIVE P/E RATIO 1.34		DIVD YLD 2.8%		VALUE LINE													
TIMELINESS 5 Lowered 8/1/06 SAFETY 2 Lowered 8/1/05 TECHNICAL 3 Lowered 1/26/07 ETA 90 (100 = Market)										High Low: 21.9 29.6 33.8 32.0 31.4 28.6 26.9 31.4 37.9 16.3 18.6 20.8 22.6 21.5 22.9 20.5 23.7 26.1										-12.1 45.8 44.6 31.2 32.8 35.5										Target Price Range 2010 2011 2012	
2010-12 PROJECTIONS Price 50 Gain 40 Ann'l Total Return 8% (+25% (M)) 2%										LEGENDS 133 x Dividends p sh divided by Interest Rate Relative Price Strength 24x-1 unit Options: No Shaded area indicates recession																					
Consider Decisions Buy 0 0 0 0 0 0 0 0 0 0 Sell 0 0 0 0 0 0 0 0 0 0 Hold 0 0 0 0 0 0 0 0 0 0																				% TOT. RETURN 3/07 1yr -12.4 9.9 3yr 49.4 42.9 5yr 79.9 75.8											
Institutional Decisions 203004 302805 402806 Buy 42 35 65 Sell 39 37 26 Hold 5714 5853 8338 Percent shares traded 4.5 1.5																															
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008																				VALUE LINE PUB, INC. 10-12											
11.18 12.29 13.34 12.59 13.17 14.48 15.48 14.76 15.96 16.16 16.26 17.33 16.37 17.18 17.44 16.20 17.40 18.15																				Revenues per sh 21.30											
1.98 1.92 2.25 2.02 2.07 2.50 2.92 2.60 2.75 2.52 2.20 2.65 2.51 2.83 3.03 2.76 3.20 3.45																				"Cash Flow" per sh 3.90											
1.21 1.09 1.35 1.22 1.17 1.51 1.83 1.45 1.53 1.31 94 1.25 1.21 1.46 1.47 1.34 1.60 1.75																				Earnings per sh 1.75											
.90 .93 .96 .99 1.02 1.04 1.06 1.07 1.09 1.10 1.12 1.12 1.12 1.13 1.14 1.15 1.16 1.17																				Div'd Dec'd per sh 1.15											
3.03 3.09 2.53 2.26 2.17 2.83 2.61 2.74 3.44 2.45 4.09 5.82 4.39 3.73 4.01 4.28 4.35 4.50																				Cap'l Spending per sh 4.35											
10.35 10.51 10.90 11.56 11.72 12.22 13.00 13.38 13.43 12.90 12.95 13.12 14.44 15.66 15.79 18.31 19.05 19.55																				Book Value per sh 21.30											
11.38 11.38 11.38 12.49 12.54 12.62 12.62 12.94 15.15 15.18 15.18 16.93 18.37 18.39 20.66 21.00 21.50																				Common Shs Outst'g 23.00											
11.2 14.1 13.6 14.1 13.7 11.9 12.6 17.8 17.8 19.6 27.1 19.8 22.1 20.1 24.9 29.6																				Avg Ann'l P/E Ratio 19.8											
.72 86 80 92 .92 75 .73 93 1.01 1.27 1.39 1.08 1.26 1.06 1.33 1.57																				Relative P/E Ratio 1.40											
6.6% 6.1% 5.2% 5.8% 6.4% 5.8% 4.6% 4.2% 4.0% 4.3% 4.4% 4.5% 4.2% 3.9% 3.1% 3.4%																				Avg Ann'l Div'd Yield 2.7%											
CAPITAL STRUCTURE as of 12/31/07 Total Debt \$293.6 mill Due in 5 Yrs \$11.9 mill LT Debt \$291.8 mill LT Interest \$22.5 mill																															
(LT interest earned: 3.5%; total int cov: 3.2x)																															
Pension Assets-12/06 \$78.4 mill Oblig. \$109.1 mill Pfd Stock \$3.5 mill Pfd Div'd \$1.15 mill 139,000 shares, 4.4% cumulative (\$25 par)																															
Common Stock 20,656,699 shs. as of 3/6/07 MARKET CAP: \$850 million (Small Cap)																															
CURRENT POSITION 2004 2005 12/31/06 (\$MILL.)																															
Cash Assets 18.8 9.5 60.3																															
Other 51.6 42.7 49.3																															
Current Assets 70.4 52.2 109.6																															
Accts Payable 19.8 36.1 33.1																															
Debt Due 1.1 1.1 3.3																															
Other 36.3 39.6 70.2																															
Current Liab. 57.2 76.8 70.2																															
Fix. Chgt. 338% 361% 317%																															
ANNUAL RATES OF change (per sh) 10 Yrs. Past 5 Yrs. Est'd '03-'05																															
Revenues 2.5% 1.5% 3.5%																															
"Cash Flow" 3.0% 1.5% 5.0%																															
Earnings 1.0% -0.5% 6.5%																															
Dividends 1.5% 1.0% 1.0%																															
Book Value 3.0% 3.0% 5.0%																															
QUARTERLY REVENUES (\$mill.)																															
Cal-ender Mar.31 Jun.30 Sep.30 Dec.31 Full Year																															
2004 60.2 88.9 97.1 69.4 315.6																															
2005 60.3 81.5 101.1 77.8 320.7																															
2006 65.2 81.1 107.8 80.6 334.7																															
2007 70.0 90.0 120 85.0 365																															
2008 75.0 97.0 128 90.0 390																															
EARNINGS PER SHARE \$																															
Cal-ender Mar.31 Jun.30 Sep.30 Dec.31 Full Year																															
2004 .08 .59 .59 .20 1.46																															
2005 .03 .41 .71 .32 1.47																															
2006 .04 .31 .68 .31 1.34																															
2007 .08 .42 .76 .34 1.60																															
2008 .10 .45 .82 .38 1.75																															
QUARTERLY DIVIDENDS PAID \$																															
Cal-ender Mar.31 Jun.30 Sep.30 Dec.31 Full Year																															
2003 .281 .281 .281 .281 1.12																															
2004 .283 .283 .283 .283 1.13																															
2005 .285 .285 .285 .285 1.14																															
2006 .2875 .2875 .2875 .2875 1.15																															
2007 .280																															
BUSINESS: California Water Service Group provides regulated and nonregulated water service to over 2 million people (483,900 customers) in 83 communities in California, Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired National Utility Company (NUC), Rio Grande Corp (11/00). Revenue breakdown, '06: residential, 70%; business, 18%; public authorities, 5%; industrial, 5%; other, 2% '06 reported deprec. rate: 3.3%. Has roughly 870 employees. Chairman: Robert W Foy President & CEO; Peter C Nelson Inc.: Delaware Address: 1720 North First Street, San Jose, California 95112-4598. Telephone: 408-367-8200. Internet: www.calwater.com.																															
California Water Service Group appears poised for a strong bottom-line rebound this year. Although the water utility provider had some trouble in 2006, we expect better weather conditions, especially in the first half of the year, to help it bounce back. Meanwhile, there are better regulatory practices in play now. The California Public Utilities Commission (CPUC), which is responsible for maintaining a balance between consumers and Cal-based utilities, recently awarded CWT an allowed ROE of 10.2% on its general rate case regarding 24 districts. The ruling was in line with what we expected and points to an improving regulatory environment in the state. This augurs well for the company's prospects, as it submits a general rate case to recover higher non-operational costs for eight of its districts every three years, and has a few cases currently being reviewed. Against this backdrop, we look for CWT to post share earnings of \$1.60 this year, representing a 19% gain. Further regulatory improvements should boost 2008 earnings. Given the CPUC's more business-friendly nature, there is a good chance that the board will																															
enact some of the reforms proposed in the Water Action Plan that are on the table. A decision is expected in the second half of this year. We are introducing a 2008 share-net estimate of \$1.75. Capital constraints remain a problem, though. CWT is making heavy investments in its current systems. Indeed, capital expenditures have increased significantly in recent years and are likely to remain high for the foreseeable future. Unfortunately, it does not have enough cash on hand to foot the bill, making additional stock and debt offerings necessary. Growth-minded investors will want to look elsewhere. The stock is ranked 5 (Lowest) for Timeliness and offers limited 3- to 5-year appreciation potential, given its financing problems. That said, those looking for a steady stream of income may like what they see. Despite its capital constraints, CWT recently raised its annual dividend, marking the 40th consecutive year of increase. Although there are higher-yielding instruments out there, CWT's 2 (Above Average) Safety rank adds appeal.																															
Andre J. Costanza																														April 27, 2007	

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7¢); '01, .4¢; '02, 8¢. Next earnings report due early May.	(B) Dividends historically paid in mid-Feb., May, Aug., and Nov. = Div'd reinvestment plan available	(C) Incl. deferred charges in '06: \$69.5 mil., \$36.5%.
(D) In millions, adjusted for split		
(E) May not total due to change in shares.		

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Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	80
Earnings Predictability	70

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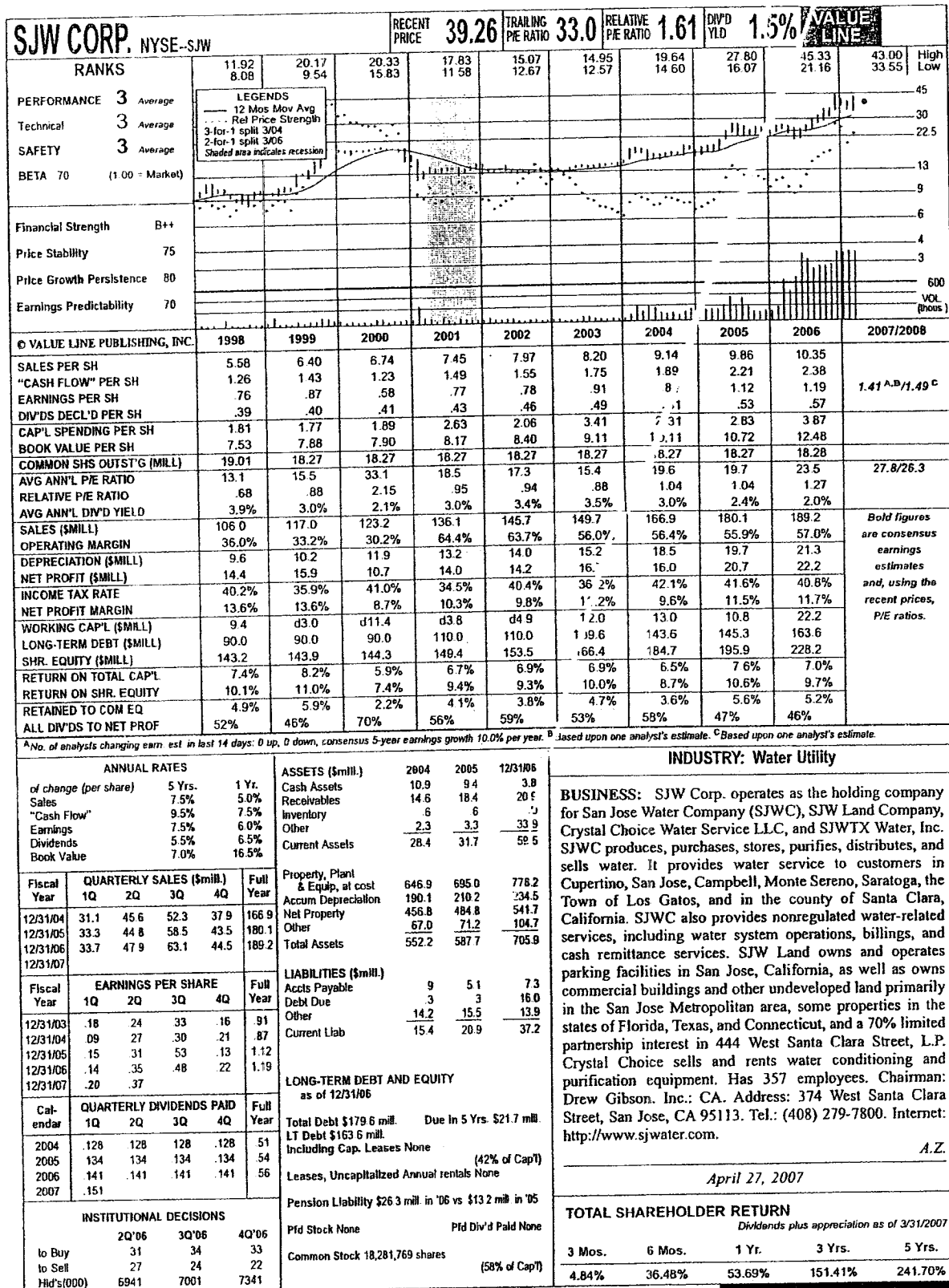
CONN. WATER SERVICES			NDQ-CTWS		RECENT PRICE	24.25	TRAILING P/E RATIO	29.9	RELATIVE P/E RATIO	1.46	DIV'D YLD	3.5%	VALUE LINE
RANKS			19.00	24.67	23.50	32.21	31.09	30.41	29.76	28.17	27.71	25.09	High
			13.33	12.67	17.00	19.50	20.35	24.00	23.83	21.91	20.29	22.52	Low
PERFORMANCE	2	Above Average	<div>LEGENDS</div> <div>12 Mos. Mov. Avg.</div> <div>Rel Price Strength</div> <div>3-for-2 split 9/98</div> <div>3-for-2 split 9/01</div> <div>Shaded area indicates recession</div>										
Technical	3	Average											
SAFETY	3	Average											
BETA	90	(1.00 = Market)											
Financial Strength	B+												
Price Stability	75												
Price Growth Persistence	55												
Earnings Predictability	80												
© VALUE LINE PUBLISHING, INC.			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007/2008	
SALES PER SH			5.58	5.87	5.70	5.93	5.77	5.91	6.04	5.81	5.68		
"CASH FLOW" PER SH			1.59	1.65	1.73	1.78	1.78	1.89	1.91	1.62	1.52		
EARNINGS PER SH			1.02	1.03	1.09	1.13	1.12	1.15	1.16	.88	.81		1.05 A,B / 1.15 C
DIV'DS DECL'D PER SH			.78	.79	.79	.80	.81	.83	.84	.85	.86		
CAP'L SPENDING PER SH			1.12	1.42	1.43	1.86	1.98	1.49	1.58	1.96	1.96		
BOOK VALUE PER SH			8.52	8.61	8.92	9.25	10.06	10.46	10.94	11.52	11.60		
COMMON SHS OUTST'G (MILL)			6.80	7.26	7.28	7.65	7.94	7.97	8.04	8.17	8.27		
AVG ANNUAL P/E RATIO			15.5	18.2	18.2	21.5	24.3	23.5	22.9	28.6	29.1		23.1/21.1
RELATIVE P/E RATIO			.81	1.04	1.18	1.10	1.33	1.34	1.21	1.51	1.57		
AVG ANNUAL DIV'D YIELD			4.9%	4.2%	4.0%	3.3%	3.0%	3.0%	3.1%	3.4%	3.6%		
SALES (\$MILL)			37.9	42.6	41.5	45.4	45.8	47.1	48.5	47.5	46.9		Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.
OPERATING MARGIN			46.2%	48.7%	48.8%	56.1%	57.7%	52.1%	51.0%	48.3%	43.7%		
DEPRECIATION (\$MILL)			3.9	4.5	4.7	5.0	5.4	5.9	6.0	6.1	5.9		
NET PROFIT (\$MILL)			7.0	7.5	8.0	8.7	8.8	9.2	9.4	7.2	6.7		
INCOME TAX RATE			34.3%	40.1%	35.7%	36.1%	33.8%	17.9%	22.9%	—	23.5%		
NET PROFIT MARGIN			18.4%	17.6%	19.2%	19.1%	19.1%	19.5%	19.4%	15.1%	14.3%		
WORKING CAP'L (\$MILL)			d3.7	d3.8	.3	d3.3	d5.1	d3.9	d.7	13.0	1.2		
LONG-TERM DEBT (\$MILL)			62.5	65.4	64.7	64.0	64.8	64.8	66.4	77.4	77.3		
SHR. EQUITY (\$MILL)			58.7	63.3	65.7	71.6	80.7	84.2	88.7	94.9	96.7		
RETURN ON TOTAL CAP'L			7.3%	7.4%	7.6%	7.9%	7.4%	7.5%	7.0%	5.0%	4.9%		
RETURN ON SHR. EQUITY			11.9%	11.8%	12.1%	12.1%	10.9%	10.9%	10.6%	7.5%	6.9%		
RETAINED TO COM EQ			2.8%	3.1%	3.2%	3.6%	3.1%	3.2%	3.1%	.3%	NMF		
ALL DIV'DS TO NET PROF			76%	74%	74%	71%	72%	71%	71%	95%	105%		
A No. of analysts changing earn. est. in last 14 days: 0 up, 0 down, consensus 5-year earnings growth 10.0% per year. B Based upon one analyst's estimate. C Based upon one analyst's estimate.													
INDUSTRY: Water Utility													
BUSINESS: Connecticut Water Services, Inc. primarily operates as a water utility company in Connecticut. It operates through three segments: Water Activities, Real Estate Transactions, and Services and Rentals. The Water Activities segment supplies public drinking water to its customers. The Real Estate Transactions segment is involved in the sale of its limited excess real estate holdings. The Services and Rentals segment provides contracted services to water and wastewater utilities and other clients, as well as leases certain of its properties to third parties. This segment's services include contract operations of water and wastewater facilities; Linebacker, its service line protection plan for public drinking water customers; and provision of bulk deliveries of emergency drinking water to businesses and residences via tanker truck. As of March 19, the company provided water to approximately 83,000 or 286,000 customers in 41 towns in Connecticut. Has about 200 employees. Chairman: Marshall T. Chiaraluce, Inc.: CT. Address: 93 West Main Street, Clinton, CT 06413. Tel.: (860) 669-8636. Internet: <a href="http://www.ctwater.com">http://www.ctwater.com</a> . A.Z.													
April 27, 2007													
TOTAL SHAREHOLDER RETURN													
Dividends plus appreciation as of 3/31/2007													
3 Mos. 6 Mos. 1 Yr. 3 Yrs. 5 Yrs.													
6.66% 10.97% -4.83% -6.21% 3.39%													
INSTITUTIONAL DECISIONS													
2Q'06 3Q'06 4Q'06													
to Buy 14 11 18													
to Sell 18 19 12													
Hld's(000) 1462 1253 1318													
ASSETS (\$mill.) 2004 2005 12/31/06													
Cash Assets .7 4.4 1.4													
Receivables 9.8 5.9 9.5													
Inventory (Avg cost) .9 .9 .9													
Other 3.9 14.9 2.4													
Current Assets 15.3 26.1 14.2													
Property, Plant & Equip, at cost 344.5 345.0 370.5													
Accum Depreciation 98.4 97.3 102.4													
Net Property 248.1 247.7 268.1													
Other 29.5 32.2 32.9													
Total Assets 290.9 306.0 315.2													
LIABILITIES (\$mill.)													
Accts Payable 5.5 4.8 6.0													
Debt Due 6.0 7.1 5.3													
Other 4.4 1.3 1.7													
Current Liab 15.9 13.2 13.0													
LONG-TERM DEBT AND EQUITY as of 12/31/06													
Total Debt \$82.6 mill. Due in 5 Yrs. \$5.3 mill.													
LT Debt \$77.3 mill.													
Including Cap. Leases None (44% of Cap'l)													
Leases, Uncapitalized Annual rentals \$3 mill.													
Pension Liability None in '06 vs None in '05													
Pfd Stock \$8 mill. Pfd Div'd Paid NMF													
Common Stock 8,270,394 shares (56% of Cap'l)													

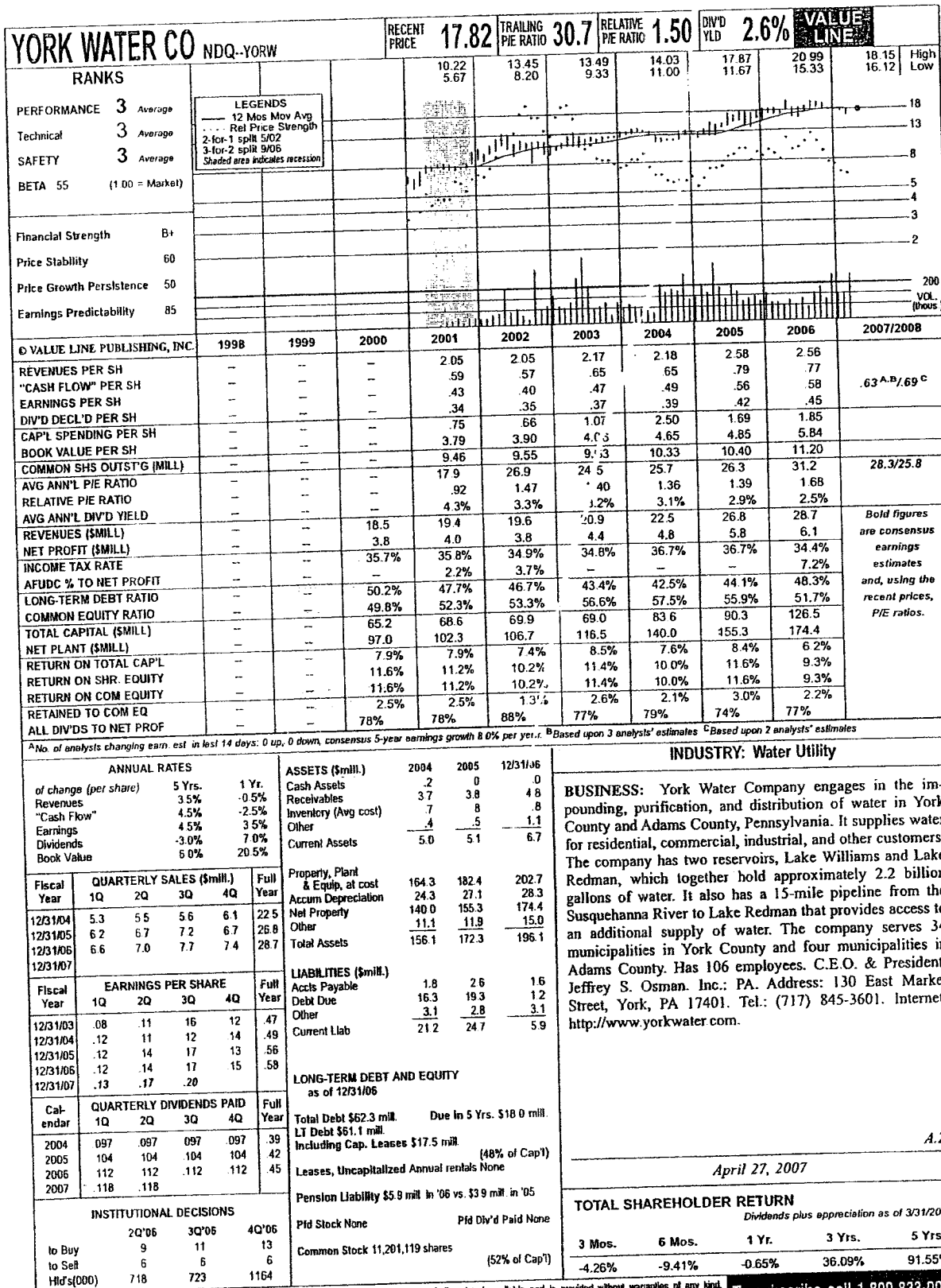
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SOUTHWEST WATER NDQ-SWWC										RECENT PRICE	14.24	P/E RATIO	29.7	Trailing: 35.6 Median: 19.0	RELATIVE P/E RATIO	1.53	DIV YLD	1.7%	VALUE LINE								
TIMELINESS	3	Raised 3/30/07	High: 3.7	5.0	5.6	9.2	8.3	10.2	12.4	11.2	14.3	15.2	19.1	15.3					Target Price	Range							
SAFETY	3	New 10/7/05	Low: 2.0	2.6	3.5	3.6	5.1	6.9	7.6	8.1	10.3	9.0	16.8	12.1					2010	2011							
TECHNICAL	3	Lowered 2/16/07	LEGENDS																	2012							
BETA	90	(1.00 = Market)	2.50 x Dividends p.sh. divided by Interest Rate Relative Price Strength																								
2010-12 PROJECTIONS										4-for-3																	
Price Gain Ann'l Total										3-for-2																	
High 18 (+25%) 8%										5-for-4																	
Low 12 (-15%) -1%										4-for-3																	
Insider Decisions										Percent shares traded																	
J A S O N D J F										15																	
to Buy 0 0 1 0 0 0 0 0 0 0										5																	
to Sell 0 1 2 1 1 2 0 0 1																											
Institutional Decisions																											
to Buy 33 30 40																											
to Sell 32 20 16																											
High 84.15 90.34 107.80																											
1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	VALUE LINE PUB, INC. 10-12									
3.34	3.77	4.03	4.20	4.84	5.31	5.61	5.63	6.16	7.49	8.15	9.12	10.70	9.23	9.10	9.42	9.60	10.00	Revenues per sh	11.00								
28	44	38	38	44	46	53	58	65	76	87	86	91	5	78	85	95	1.05	"Cash Flow" per sh	1.35								
02	19	08	09	12	15	21	25	31	38	42	39	44	7	34	40	45	.50	Earnings per sh <sup>A</sup>	.70								
.18	.18	.14	.08	.08	.09	.09	.10	.11	.13	.14	.15	.16	.8	.20	.21	.24	.26	Div'd Decl'd per sh <sup>B</sup>	.34								
39	42	60	72	84	95	74	79	53	55	1.06	1.78	1.14	1.16	1.65	1.87	1.90	1.95	Cap'l Spending per sh	2.05								
2.41	2.42	2.31	2.31	2.45	2.40	2.52	2.70	3.05	3.44	3.84	4.27	4.90	1.17	6.49	6.98	7.60	8.45	Book Value per sh <sup>D</sup>	10.50								
11.60	11.80	11.97	12.13	11.74	12.45	12.65	12.83	13.12	13.99	14.17	14.35	16.17	2.136	22.33	23.80	25.00	26.00	Common Shs Outstg <sup>C</sup>	30.00								
NMF	14.5	35.8	22.3	14.6	16.5	16.9	17.2	19.6	17.0	19.8	24.8	21.2	51.6	35.5	34.8	34.8	34.8	Avg Ann'l P/E Ratio	21.0								
NMF	88	2.11	1.46	98	103	97	89	112	111	101	135	121	2.73	1.89	1.88	1.88	1.88	Relative P/E Ratio	1.40								
5.5%	6.6%	4.7%	4.2%	4.7%	3.4%	2.7%	2.3%	1.8%	2.0%	1.7%	1.5%	1.7%	1.5%	1.6%	1.5%	1.5%	1.5%	Avg Ann'l Div'd Yield	2.3%								
CAPITAL STRUCTURE as of 12/31/06										Bold figures are Value Line estimates																	
Total Debt \$130.0 mill Due in 5 Yrs \$41.0 mill																											
LT Debt \$128.6 mill LT Interest \$8.0 mill																											
Total Interest Coverage 2.7x (44% of Cap'l)																											
Leases, Uncapitalized: Annual rentals \$6.7 mill																											
Pension Liability None																											
Pfd Stock \$ 458 mill Pfd Div'd \$ 024 mill																											
Common Stock 23,802,000 shs																											
MARKET CAP: \$350 million (Small Cap)																											
CURRENT POSITION 2004 2005 12/31/06																											
(\$MILL.)																											
Cash Assets 1.9 3.0 4.3																											
Receivables 23.9 26.5 27.5																											
Inventory (Avg Cst) 1.9 -- --																											
Other 17.6 18.2 16.5																											
Current Assets 45.3 47.7 48.3																											
Accts Payable 12.3 10.0 12.7																											
Debt Due 3.4 9.5 1.4																											
Other 20.0 21.1 21.7																											
Current Liab 35.7 40.6 35.8																											
ANNUAL RATES of change (per sh)																											
Past 10 Yrs Past 5 Yrs Est'd '03-'05 to '10-'12																											
Revenues 8.5% 8.5% 8.5%																											
"Cash Flow" 7.0% 3.5% 8.0%																											
Earnings 13.5% 1.5% 11.0%																											
Dividends 6.0% 10.0% 9.5%																											
Book Value 9.5% 14.0% 8.5%																											
QUARTERLY REVENUES (\$ MILL.)																											
Cal-ender Mar.31 Jun.30 Sep.30 Dec.31 Full Year																											
2004 39.8 45.7 55.0 47.5 188.0																											
2005 45.2 51.3 54.7 52.0 203.2																											
2006 50.8 55.4 60.1 57.9 224.2																											
2007 55.0 60.0 65.0 60.0 240																											
2008 62.0 66.0 68.0 64.0 260																											
EARNINGS PER SHARE <sup>A</sup>																											
Cal-ender Mar.31 Jun.30 Sep.30 Dec.31 Full Year																											

Utilities Services of South Carolina, Inc.  
Indicated Common Equity Cost Rate  
Through Use of a Risk Premium Model  
Using an Adjusted Total Market Approach

Line No		Proxy Group of Eight AUS Utility Reports Water Companies	Proxy Group of Four Value Line (Standard Edition) Water Companies
1	Prospective Yield on Aaa Rated Corporate Bonds (1)	6.1 %	6.1 %
2	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	<u>0.5 (2)</u>	<u>0.5 (2)</u>
3	Adjusted Prospective Yield on A Rated Public Utility Bonds	6.6 %	6.6 %
4	Adjustment to Reflect Bond Rating Difference of Proxy Group	<u>0.0 (3)</u>	<u>0.0 (3)</u>
5	Adjusted Prospective Bond Yield	6.6	6.6
6	Equity Risk Premium (4)	<u>4.2</u>	<u>4.4</u>
7	Risk Premium Derived Common Equity Cost Rate	<u>10.8 %</u>	<u>11.0 %</u>

- Notes: (1) Derived in Note (3) on page 6 of this Schedule.
- (2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.53%, rounded to 0.5% from page 4 of this Schedule.
- (3) No adjustment necessary as the average Moody's bond rating of the proxy group is A2.
- (4) From page 5 of this Schedule.

Utilities Services of South Carolina, Inc.  
Comparison of Bond Ratings and Business Profile for  
the Proxy Group of Eight AUS Utility Reports Water Companies, the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

	June 2007 Moody's Bond Rating		June 2007 Standard & Poor's Bond Rating				Standard & Poor's Business Position / Profile (2)
	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)	Credit Rating	Numerical Weighting (1)	
<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>							
American States Water Co. (3)	A2	6	A-	7	A-	7	3.0
Aqua America, Inc. (4)	NR	--	AA-	4	A+	5	2.0
Artesian Resources Corp. (5)	NR	--	NR	--	NR	--	--
California Water Service Group (6)	A2	6	NR	--	A+	5	3.0
Connecticut Water Service Inc. (7)	NR	--	AAA	1	A	6	3.0
Middlesex Water Company	NR	--	A	6	A-	7	3.0
SJW Corp. (8)	NR	--	NR	--	NR	--	--
York Water Company	NR	--	A-	7	NR	--	2.0
Average	<u>A2</u>	<u>6.0</u>	<u>A+</u>	<u>5.0</u>	<u>A</u>	<u>6.0</u>	<u>2.7</u>
<u>Proxy Group of Four Value Line (Standard Edition) Water</u>							
American States Water Co. (3)	A2	6	A-	7	A-	7	3.0
Aqua America, Inc. (4)	NR	--	AA-	4	A+	5	2.0
California Water Service Group (6)	A2	6	NR	--	A+	5	3.0
Southwest Water Company (9)	NR	--	NR	--	NR	--	--
Average	<u>A2</u>	<u>6.0</u>	<u>A+ / A</u>	<u>5.5</u>	<u>A</u>	<u>5.7</u>	<u>2.7</u>

- Notes: (1) From page 3 of this Schedule.  
(2) From Standard & Poor's U.S. Issuer Ranking: U.S. Utility and Power Companies, Strongest to Weakest, June 22, 2007  
(3) Ratings and business profile are those of Golden State Water Company  
(4) Ratings and business profile are those of Aqua Pennsylvania, Inc.  
(5) Ratings and business are a composite of those of Artesian Water Company and Southwood Water Company.  
(6) Ratings and business profile are those of California Water Service Company.  
(7) Ratings and business position are those of The Connecticut Water Company  
(8) Ratings and business position are those of San Jose Water Company.  
(9) Ratings and business position are a composite of those of Hornsby Bend Utility Co., New Mexico Utilities, Inc., Suburban Water Systems, and Windermere Utility Co.

Source of information: Moody's Investors Service  
Standard & Poor's Global Utilities Rating Service

Utilities Services of South Carolina, Inc.  
Numerical Assignment for  
Moody's and Standard & Poor's Bond Ratings

<u>Moody's Bond Rating</u>	<u>Numerical Bond Weighting</u>	<u>Standard &amp; Poor's Bond Rating</u>
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-

Moody's  
Comparison of Interest Rate Trends  
for the Three Months Ending May 2007 (1)

<u>Years</u>	<u>Corporate Bonds</u>	<u>Public Utility Bonds</u>			<u>Spread - Corporate v. Public Utility Bonds</u>			<u>Spread - Public Utility Bonds</u>	
	<u>Aaa Rated</u>	<u>Aa Rated</u>	<u>A Rated</u>	<u>Baa Rated</u>	<u>Aa (Pub. Util.) over Aaa (Corp.)</u>	<u>A (Pub. Util.) over Aaa (Corp.)</u>	<u>Baa (Pub. Util.) over Aaa (Corp.)</u>	<u>A over Aa</u>	<u>Baa over A</u>
March-07	5.30 %	5.66 %	5.85 %	6.10 %					
April-07	5.47	5.83	5.97	6.24					
May-07	5.47	5.86	5.99	6.23					
Average of Last 3 Months	<u>5.41 %</u>	<u>5.78 %</u>	<u>5.94 %</u>	<u>6.19 %</u>	<u>0.37 %</u>	<u>0.53 %</u>	<u>0.78 %</u>	<u>0.16 %</u>	<u>0.25 %</u>

Notes: (1) All yields are distributed yields.

Source of Information: Mergent Bond Record, June 2007, Vol. 74, No. 5



Utilities Services of South Carolina, Inc.  
Judgment of Equity Risk Premium for  
the Proxy Group of Eight AUS Utility Reports Water Companies, the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

<u>Line No.</u>		<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>	<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>
1.	Calculated equity risk premium based on the total market using the beta approach (1)	4.0 %	4.4 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	<u>4.4</u>	<u>4.4</u>
3.	Average equity risk premium	<u><u>4.2 %</u></u>	<u><u>4.4 %</u></u>

Notes: (1) From page 6 of this Schedule.  
(2) From page 8 of this Schedule.

Utilities Services of South Carolina, Inc.  
Derivation of Equity Risk Premium Based on the Total Market Approach  
Using the Beta for  
the Proxy Group of Eight AUS Utility Reports Water Companies, the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

Line No.		Proxy Group of Eight AUS Utility Reports Water	Proxy Group of Four Value Line (Standard Edition) Water Companies
1	Arithmetic mean total return rate on the Standard & Poor's 500 Composite Index - 1926-2006 (1)	12.3 %	12.3 %
2	Arithmetic mean yield on Aaa and Aa Corporate Bonds 1926-2006 (2)	(6.1)	(6.1)
3	Historical Equity Risk Premium	6.2 %	6.2 %
4	Forecasted 3-5 year Total Annual Market Return (3)	9.8 %	9.8 %
5	Prospective Yield an Aaa Rated Corporate Bonds (4)	(6.1)	(6.1)
6	Forecasted Equity Risk Premium	3.7 %	3.7 %
7	Average of Historical and Forecasted Equity Risk Premium (5)	5.0 %	5.0 %
8	Adjusted Value Line Beta (6)	0.80	0.88
9	Beta Adjusted Equity Risk Premium	4.0 %	4.4 %

- Notes: (1) From Stocks Bonds Bills and Inflation - Market Results for 1926-2006 - 2007 Yearbook Valuation Edition, Morningstar, Inc., 2007 Chicago, IL.
- (2) From Moody's Industrial Manual and Mergent Bond Record Monthly Update
- (3) From page 3 of Schedule PMA-11
- (4) Average forecast based upon six quarterly estimates of Aaa rated corporate bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated July 1, 2007 (see page 7 of this Schedule). The estimates are detailed below

Third Quarter 2007	5.9 %
Fourth Quarter 2007	6.0
First Quarter 2008	6.1
Second Quarter 2008	6.1
Third Quarter 2008	6.1
Fourth Quarter 2008	6.2
Average	6.1 %

- (5) Average of the Historical Equity Risk Premium of 6.2% from Line No. 3 and the Forecasted Equity Risk Premium of 3.7% from Line No. 6  $((6.2\% + 3.7\%) / 2 = 4.95\%$ , rounded to 5.0%.
- (6) From page 9 of this Schedule

2 ■ BLUE CHIP FINANCIAL FORECASTS ■ JULY 1, 2007

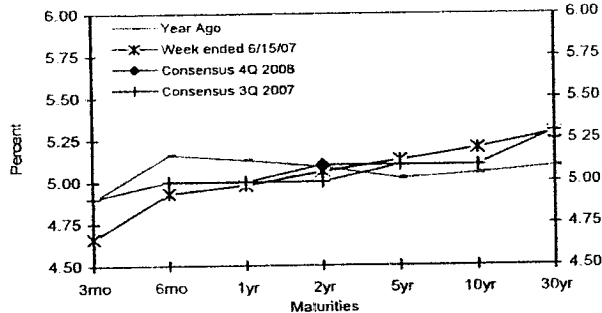
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

	History-----								Consensus Forecasts-Quarterly Avg.						
	-----Average For Week Ending-----				---Average For Month---				Latest Q	4Q	3Q	1Q	2Q	3Q	4Q
Interest Rates	Jun 15	June 8	Jun 1	May 25	May	Apr.	Mar.	2Q 2007*	2007	2007	2008	2008	2008	2008	2008
Federal Funds Rate	5.26	5.24	5.28	5.24	5.25	5.25	5.26	5.25	5.2	5.2	5.2	5.2	5.1	5.1	5.1
Prime Rate	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.2	8.2	8.2	8.1	8.1	8.1
LIBOR, 3-mo.	5.36	5.36	5.36	5.36	5.35	5.35	5.35	5.34	5.4	5.4	5.3	5.3	5.3	5.3	5.2
Commercial Paper, 1-mo.	5.26	5.22	5.24	5.23	5.22	5.23	5.23	5.23	5.3	5.3	5.2	5.2	5.2	5.2	5.2
Treasury bill, 3-mo.	4.66	4.8	4.82	4.90	4.87	5.01	5.08	4.87	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Treasury bill, 6-mo.	4.93	4.97	4.98	5.00	4.98	5.07	5.10	5.00	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Treasury bill, 1 yr.	4.98	4.98	4.96	4.95	4.91	4.93	4.92	4.94	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Treasury note, 2 yr.	5.06	4.99	4.92	4.84	4.77	4.67	4.57	4.82	5.0	5.1	5.1	5.0	5.1	5.1	5.1
Treasury note, 5 yr.	5.13	4.98	4.86	4.77	4.67	4.59	4.48	4.77	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Treasury note, 10 yr.	5.20	5.02	4.90	4.84	4.75	4.69	4.56	4.85	5.1	5.2	5.2	5.2	5.3	5.3	5.3
Treasury note, 30 yr.	5.29	5.12	5.02	4.99	4.9	4.87	4.72	4.99	5.3	5.3	5.3	5.3	5.4	5.4	5.4
Corporate Aaa bond	5.89	5.67	5.58	5.55	5.47	5.47	5.30	5.57	5.9	6.0	6.1	6.1	6.1	6.1	6.2
Corporate Baa bond	6.79	6.62	6.51	6.47	6.39	6.39	6.27	6.50	6.8	6.9	7.0	7.0	7.1	7.1	7.1
State & Local bonds	4.64	4.54	4.41	4.38	4.31	4.26	4.15	4.39	4.7	4.7	4.8	4.8	4.8	4.8	4.8
Home mortgage rate	6.74	6.53	6.42	6.37	6.26	6.18	6.16	6.36	6.6	6.7	6.7	6.7	6.8	6.8	6.8
	History-----								Consensus Forecasts-Quarterly Avg.						
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	4Q	3Q	
Key Assumptions	2005	2005	2006	2006	2006	2006	2007	2007*	2007	2007	2008	2008	2008	2008	2008
Major Currency Index	84.7	85.8	84.9	82.2	81.7	81.6	81.9	79.3	79.0	78.6	78.3	78.0	77.9	78.0	
Real GDP	4.2	1.8	5.6	2.6	2.0	2.5	0.6	3.1	2.6	2.7	2.9	2.9	2.9	3.0	
GDP Price Index	3.3	3.3	3.3	3.3	1.9	1.7	4.0	3.1	2.3	2.2	2.4	2.2	2.2	2.1	
Consumer Price Index	5.5	3.5	1.8	5.1	3.0	-2.0	3.8	5.2	2.6	2.1	2.5	2.5	2.4	2.2	

<sup>1</sup>Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H 15. LIBOR quotes available from *The Wall Street Journal*. Definitions reported here are same as those in FRSR H 15. Treasury yields are reported on a constant maturity basis. Historical data for the U.S. Federal Reserve Board's Major Currency Index is from FRSR H 10 and G 5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). \*Interest rate data for 2Q 2007 based on historical data through the week ended June 15<sup>th</sup>. Data for 2Q 2007 Major Currency Index also is based on data through week ended June 15<sup>th</sup>. Figures for 2Q 2007 Real GDP, GDP Chained Price Index and Consumer Price Index are consensus forecasts based on a special question asked of the panel members this month.

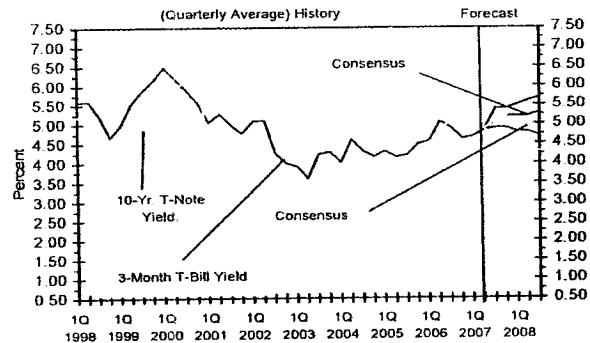
U.S. Treasury Yield Curve

Week ended June 15, 2007 and Year Ago vs.  
3Q 2007 and 4Q 2008 Consensus forecasts



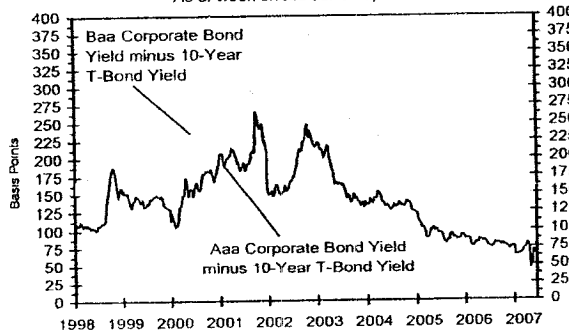
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) History



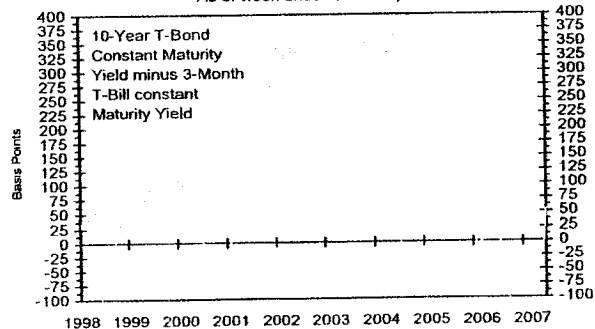
Corporate Bond Spreads

As of week ended June 15, 2007



U.S. Treasury Yield Curve

As of week ended June 15, 2007



Utilities Services of South Carolina, Inc.  
Derivation of Mean Equity Risk Premium Based on a Study  
Using Holding Period Returns of Public Utilities

<u>Line No.</u>		Over A Rated Public Utility Bonds <u>AUS Consultants - Utility Services Study (1)</u>
		<u>1</u>
Time Period		1928-2005
1.	Arithmetic Mean Holding Period Returns (2): Standard & Poor's Public Utility Index	11.0 %
2.	Arithmetic Mean Yield on: A Rated Public Utility Bonds	<u>(6.6)</u>
3.	Equity Risk Premium	<u>4.4 %</u>

- Notes: (1) S&P Public Utility Index and Moody's Public Utility Bond Average Annual Yields 1928-2005, (US Consultants - Utility Services, 2006).
- (2) Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

Utilities Services of South Carolina, Inc.  
Value Line Adjusted Betas for  
the Proxy Group of Eight AUS Utility Reports Water Companies, the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

	<u>Value Line Adjusted Beta</u>
<u>Proxy Group of Eight AUS Utility Reports Water</u>	
American States Water Co.	0.80
Aqua America, Inc.	0.90
Artesian Resources Corp.	NA
California Water Service Group	0.90
Connecticut Water Service Inc.	0.90
Middlesex Water Company	0.85
SJW Corp.	0.70
York Water Co.	0.55
Average	<u>0.80</u>
 <u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>	
American States Water Co.	0.80
Aqua America, Inc.	0.90
California Water Service Group	0.90
Southwest Water Company	0.90
Average	<u>0.88</u>

NA = Not Available

Source of Information: Value Line Investment Survey, April 27, 2007  
Standard Edition and Small and Mid-Cap Edition

Utilities Services of South Carolina, Inc.  
of the Capital Asset Pricing Model for  
the Proxy Group of Eight AUS Utility Reports Water Companies and the  
Proxy Group of Four Value Line (Standard Edition) Water Companies

Line <u>No.</u>		<u>Proxy Group of Eight AUS Utility Reports Water Companies</u>	<u>Proxy Group of Four Value Line (Standard Edition) Water Companies</u>
1	Traditional Capital Asset Pricing Model (1)	10.2 %	10.4 %
2.	Empirical Capital Asset Pricing Model (1)	<u>10.2 %</u>	<u>10.6 %</u>
3.	Conclusion	<u>10.2 %</u>	<u>10.5 %</u>

Notes: (1) From page 2 of this Schedule.

Utilities Services of South Carolina, Inc.  
Indicated Common Equity Cost Rate Through Use  
of the Capital Asset Pricing Model

<u>1</u>	<u>2</u>	<u>3</u>
Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 5.8% (1)	CAPM Result Including Risk-Free Rate of 5.3% (2)

Traditional Capital Asset Pricing Model (3)

Proxy Group of Eight AUS Utility  
Reports Water Companies

American States Water Co	0.80	4.6 %	9.9 %
Aqua America, Inc	0.90	5.2	10.5
Artesian Resources Corp	NA	NA	NA
California Water Service Group	0.90	5.2	10.5
Connecticut Water Service Inc	0.90	5.2	10.5
Middlesex Water Company	0.85	4.9	10.2
SJW Corp	0.70	4.1	9.4
York Water Co	0.55	3.2	8.5
Average	<u>0.80</u>	<u>4.6 %</u>	<u>10.2 % (4)</u>

Proxy Group of Four Value Line  
(Standard Edition) Water Companies

American States Water Co	0.80	4.6 %	9.9 %
Aqua America, Inc	0.90	5.2	10.5
California Water Service Group	0.90	5.2	10.5
Southwest Water Company	0.90	5.2	10.5
Average	<u>0.88</u>	<u>5.1 %</u>	<u>10.4 % (4)</u>

Empirical Capital Asset Pricing Model (5)

Proxy Group of Eight AUS Utility  
Reports Water Companies

American States Water Co	0.80	4.9 %	10.2 %
Aqua America, Inc	0.90	5.4	10.7
Artesian Resources Corp	NA	NA	NA
California Water Service Group	0.90	5.4	10.7
Connecticut Water Service Inc	0.90	5.4	10.7
Middlesex Water Company	0.85	5.1	10.4
SJW Corp	0.70	4.5	9.8
York Water Co	0.55	3.8	9.1
Average	<u>0.80</u>	<u>4.9 %</u>	<u>10.2 % (4)</u>

Proxy Group of Four Value Line  
(Standard Edition) Water Companies

American States Water Co	0.80	4.9 %	10.2 %
Aqua America, Inc	0.90	5.4	10.7
California Water Service Group	0.90	5.4	10.7
Southwest Water Company	0.90	5.4	10.7
	<u>0.88</u>	<u>5.3 %</u>	<u>10.6 % (4)</u>

See page 3 for notes.

Utilities Services of South Carolina Inc.  
Development of the Market-Required Rate of Return on Common Equity Using  
the Capital Asset Pricing Model for  
the Proxy Group of Eight AUS Utility Reports Water Companies and the  
Proxy Group of Four Value Line (Standard Edition) Water Companies  
Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

- (1) From the three previous month-end (Apr. '07 – Jun. '07), as well as a recently available (Jul. 13, 2007), Value Line Summary & Index, a forecasted 3-5 year total annual market return of 9.8% can be derived by averaging the 3-month and spot forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the Value Line average forecasted annual dividend yield

The 3-5 year average total market appreciation of 37% produces a four-year average annual return of 8.19%  $((1.37^{25}) - 1)$ . When the average annual forecasted dividend yield of 1.62% is added, a total average market return of 9.81%, rounded to 9.8%  $(1.62\% + 8.19)$  is derived.

The 3-month and spot forecasted total market return of 9.8% minus the risk-free rate of 5.3% (developed in Note 2) is 4.5%  $(9.8\% - 5.3\%)$ . The Ibbotson Associates calculated market premium of 7.1% for the period 1926-2006 results from a total market return of 12.3% less the average income return on long-term U.S. Government Securities of 5.2%  $(12.3\% - 5.2\% = 7.1\%)$ . This is then averaged with the 4.5% Value Line market premium resulting in a 5.8%, market premium. The 5.8% market premium is then multiplied by the beta in column 1 of page 2 of this Schedule.

- (2) Average forecast based upon six quarterly estimates of 30-year Treasury Note yields per the consensus of nearly 50 economists reported in the Blue Chip Financial Forecasts dated July 1, 2007 (see page 7 of Schedule PMA-10.) The estimates are detailed below:

	<u>30-Year</u> <u>Treasury Note Yield</u>
Third Quarter 2007	5.3%
Fourth Quarter 2007	5.3
First Quarter 2008	5.3
Second Quarter 2008	5.3
Third Quarter 2008	5.4
Fourth Quarter 2008	5.4
Average	<u>5.3%</u>

- (3) The traditional Capital Asset Pricing Model (CAPM) is applied using the following formula:

$$R_S = R_F + \beta (R_M - R_F)$$

Where  $R_S$  = Return rate of common stock  
 $R_F$  = Risk Free Rate  
 $\beta$  = Value Line Adjusted Beta  
 $R_M$  = Return on the market as a whole

- (4) Includes only those indicated common equity cost rates which are above 8.2%, i.e., 200 basis points above the prospective yield of 6.2% on A rated Moody's public utility bonds (page 1 of Schedule PMA-10)

- (5) The empirical CAPM is applied using the following formula:

$$R_S = R_F + .25 (R_M - R_F) + .75 \beta (R_M - R_F)$$

Where  $R_S$  = Return rate of common stock  
 $R_F$  = Risk-Free Rate  
 $\beta$  = Value Line Adjusted Beta  
 $R_M$  = Return on the market as a whole

Source of Information: Value Line Summary & Index  
Blue Chip Financial Forecasts, July 1, 2007  
Value Line Investment Survey, April 27, 2007, Standard Edition and Small and Mid-Cap Edition  
Stocks, Bonds, Bills and Inflation – Market Results for 1926-2006 – Valuation Edition 2007 Yearbook, Morningstar, Inc., Chicago, IL



## Rate of Return on Book Common Equity, Net Worth or Partners' Capital

[illegible]

### Comparable Earnings Analysis

Proxy Group of Eight AUS Utility Reports Water Companies (!)

[illegible]

Utilities Services of South Carolina, Inc.  
Comparable Earnings Analysis  
for a Proxy Group of One Hundred Forty-Two Non-Utility Companies Comparable to the  
Proxy Group of Eight AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Forty-Two Non-Utility Companies Comparable to the Proxy Group of Eight AUS Utility Reports Water Companies (1)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital					5-Year Average (2)		5-Year Projected (3)	
					2002	2003	2004	2005	2006	Percent	Student's T-Statistic	Percent	Student's T-Statistic
Toro Co.	1.00	0.03	2.9218	0.0016	17.4	16.5	26.0	29.2	32.9	24.8	0.85	33.0 (4)	2.64
Total System Svcs.	1.00	0.95	3.5679	0.1121	20.9	19.2	17.4	19.2	20.5	19.4	0.09	14.0	(0.48)
Tupperware Brands	1.00	0.96	3.4360	0.1080	42.9	21.0	29.9	25.7	23.5	28.6	1.04	20.5	0.59
UnitedHealth Group	0.65	0.46	3.2754	0.1029	30.5	35.6	24.1	18.0	20.0	25.6	0.75	25.0	1.33
Universal Health Sv. B'	0.75	0.57	3.5183	0.1105	19.0	17.7	13.2	13.2	10.9	14.6	(0.38)	12.0	(0.80)
WD-40 Co.	0.65	0.74	3.5600	0.1118	30.5	27.9	22.8	21.6	18.2	24.2	0.59	16.0	(0.15)
Washington Group Int'l	0.95	0.87	3.3956	0.1167	6.3	6.4	7.0	7.9	10.1	7.5	(1.13)	11.0	(0.97)
Westport Inc.	0.85	0.75	3.6296	0.1140	9.4	12.4	5.4	10.0	12.5	9.9	(0.89)	12.5	(0.72)
Wolverine World Wide	0.95	0.87	3.3135	0.1041	13.0	12.0	14.4	16.1	16.4	14.4	(0.42)	17.0	0.02
Zebra Techn. 'A'	1.00	0.96	3.6256	0.1139	13.4	14.1	15.1	13.1	13.0	13.7	(0.49)	12.0	(0.80)
Zimmer Holdings	0.75	0.60	3.4973	0.1088	70.4	9.3	15.2	16.5	17.0	25.7	0.74	19.0	0.34
Average for the Non-Utility Group	<u>0.89</u>	<u>0.79</u>	<u>3.2264</u>	<u>0.1014</u>									
Average for the Proxy Group of Eight AUS Utility Reports Water Companies	<u>0.80</u>	<u>0.67</u>	<u>3.2277</u>	<u>(5) 0.1014</u>									
Mean										<u>17.1%</u>		<u>16.2%</u>	
Conclusion (6)											<u>16.7%</u>	(6)	
Conservative Mean (7)										<u>14.4%</u>		<u>14.2%</u>	
Conservative Conclusion (8)											<u>14.3%</u>	(8)	

See pages 6 and 7 for notes.

**Utilities Services of South Carolina, Inc.**  
**Comparable Earnings Analysis**  
 for a Proxy Group of One Hundred Seventy-Three Non-Utility Companies Comparable to the  
**Proxy Group of Four Value Line (Standard Edition) Water Companies (9)**

Proxy Group of One Hundred Seventy-Three Non-Utility Companies Comparable to the Proxy Group of Four Value Line (Standard Edition) Water Companies (9)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital								5-Year Average (2)		5-Year Projected (3)	
					Rate of Return on Book Common Equity, Net Worth or Partners' Capital								5-Year Average (2)		5-Year Projected (3)	
					2002	2003	2004	2005	2006	Percent	T-Statistic	Percent	Student's T-Statistic			
ABM Industries Inc.	0.80	0.66	3.1680	0.0995	12.1	8.2	9.5	9.8	8.9	0.7	%	(0.86)	13.0	%	(0.55)	
Abbott Labs.	0.90	0.75	2.8490	0.0926	30.4	26.6	24.8	27.1	27.3	27.2	%	1.07	22.0	1.05	1.05	
Advance Auto Parts	0.90	0.84	3.5672	0.1120	20.7	25.4	26.3	25.5	22.4	24.1	%	0.73	20.0	0.70	0.70	
Airgas Inc.	0.95	0.91	3.2330	0.1015	11.7	11.8	11.3	13.7	13.7	12.4	%	(0.56)	15.0	(0.20)	15.0	
Albany Int'l 'A'	1.05	1.03	2.8631	0.0931	13.7	11.8	9.8	12.9	12.8	12.2	%	(0.58)	12.5	(0.64)	12.5	
Albemarle Corp.	1.05	1.07	2.8012	0.0880	12.6	10.3	10.8	11.8	19.2	12.8	%	(0.51)	18.0	0.34	18.0	
Allergan Inc.	0.85	0.74	2.9627	0.0931	24.5	42.4	33.2	30.4	14.4	29.0	%	1.26	18.0	0.34	18.0	
Allied Capital Corp.	0.80	0.68	3.3121	0.1040	14.7	10.0	12.6	33.3	8.6	15.8	%	(0.19)	21.5	0.96	21.5	
Amer. Cap. Strategies	1.00	0.97	3.0704	0.0984	14.9	12.0	11.8	10.8	9.8	11.9	%	(0.62)	18.5	0.07	18.5	
Amer. Greetings	0.90	0.79	3.2385	0.1017	11.2	8.3	7.8	7.4	2.5	7.4	%	(1.11)	9.5	(1.18)	9.5	
AmensourceBergen	0.85	0.70	3.4158	0.1073	10.8	11.2	10.8	8.3	11.6	10.5	%	(0.77)	12.0	(0.73)	12.0	
Anadarko Petroleum	0.90	0.83	3.2216	0.1012	11.8	14.4	17.2	22.3	18.7	16.9	%	(0.07)	14.0	(0.38)	14.0	
Annaly Capital Mgmt.	1.00	0.98	3.1894	0.1005	20.3	15.7	14.6	4.9	5.6	12.2	%	(0.58)	15.0	(0.20)	15.0	
Apache Corp.	0.90	0.80	3.3705	0.1059	11.5	19.1	20.4	24.9	19.3	19.0	%	0.16	11.0	(0.91)	11.0	
Applebee's Int'l	0.85	0.73	3.2244	0.1013	21.1	21.6	22.3	24.7	18.0	21.5	%	0.44	18.0	0.34	18.0	
Apria Healthcare	0.80	0.63	3.5143	0.1104	29.4	31.7	28.5	25.6	18.0	26.6	%	1.00	12.0	(0.73)	12.0	
Archer Daniels Mid'd	0.85	0.72	3.4393	0.1080	6.8	6.2	6.7	10.9	13.4	9.4	%	(0.89)	12.5	(0.64)	12.5	
Arrow Int'l	0.75	0.57	3.2722	0.1028	13.1	13.3	12.5	9.3	10.7	11.6	%	(0.65)	14.0	(0.38)	14.0	
Barnes Group	0.95	0.90	3.3062	0.1038	20.8	20.1	22.9	25.3	23.0	22.4	%	0.54	22.0	1.06	22.0	
Bed Bath & Beyond	0.95	0.88	2.7787	0.0873	10.4	17.0	19.5	20.7	20.8	17.7	%	0.02	12.5	(0.64)	12.5	
Berkley (W.R.)	0.75	0.61	3.0321	0.0952	20.4	22.3	22.5	24.8	24.2	22.8	%	0.58	21.5	0.96	21.5	
Biomet	0.95	0.86	3.0279	0.0951	43.6	36.5	35.7	41.8	38.0	37.2	%	(4)	2.16	21.0	0.68	21.0
Black & Decker	0.85	0.75	3.0103	0.0945	13.4	11.4	5.7	6.8	7.5	9.0	%	(0.93)	12.0	(0.73)	12.0	
Bob Evans Farms	1.00	0.98	3.1287	0.0983	10.8	10.6	12.1	10.9	3.5	9.6	%	(0.87)	10.0	(1.09)	10.0	
Borders Group	1.05	1.02	3.5685	0.1058	11.8	15.7	16.6	16.1	9.9	14.0	%	(0.38)	16.5	0.07	16.5	
Briggs & Stratton	0.90	0.81	3.4277	0.1077	17.0	16.1	20.7	18.0	18.0	18.0	%	0.05	23.0	1.23	23.0	
Bunker Int'l	1.00	0.98	2.9572	0.0925	22.7	31.7	25.4	26.8	13.6	23.8	%	0.67	23.5	1.32	23.5	
Bristol-Myers Squibb	0.95	0.87	2.8177	0.0885	21.2	22.2	20.5	19.7	10.5	20.4	%	0.32	15.5	0.19	15.5	
Buckley (The) Inc.	0.90	0.78	3.6135	0.1135	12.1	11.3	13.0	17.3	19.4	14.6	%	(0.32)	17.0	0.19	17.0	
C.H. Robinson	0.95	0.91	3.3881	0.1064	22.5	22.1	26.1	28.3	24.2	24.2	%	0.74	25.0	1.59	25.0	
CBRL Group	0.85	0.71	3.4492	0.1083	11.7	13.4	13.2	14.6	38.5	18.3	%	0.09	15.5	(0.11)	15.5	
CDW Corp.	0.90	0.82	3.4887	0.1096	20.0	16.5	19.4	21.5	20.3	19.5	%	0.22	16.5	0.07	16.5	
CLARCOR Inc.	0.95	0.85	2.8115	0.0914	14.6	14.7	14.9	15.8	15.4	15.1	%	(0.20)	14.0	(0.38)	14.0	
CSX Corp.	1.00	0.93	2.9303	0.0920	7.8	6.3	6.8	9.7	11.8	9.4	%	(1.00)	13.5	(0.46)	13.5	
CVS Caremark Corp.	0.85	0.70	3.0918	0.0971	13.8	14.1	13.1	14.1	13.5	13.7	%	(0.42)	11.5	(0.82)	11.5	
Cabot Corp.	0.95	0.88	3.3320	0.1047	12.1	11.8	10.2	11.5	8.8	10.9	%	(0.73)	13.0	(0.55)	13.0	
Carlisle Cos.	0.95	0.82	2.9245	0.0919	13.1	14.1	16.9	18.3	18.8	16.2	%	(0.14)	15.0	(0.20)	15.0	
Cassey's Gen'l Stores	1.00	0.94	3.2352	0.1016	9.8	8.3	9.1	12.0	10.0	9.8	%	(0.85)	13.0	(0.55)	13.0	
ChoicePoint Inc.	0.95	0.81	3.2895	0.1033	19.1	16.1	15.0	16.0	20.9	17.4	%	(0.01)	18.0	(0.02)	18.0	
Coca-Cola Bottling	0.75	0.56	3.4431	0.1081	69.0	58.5	33.9	30.5	24.7	43.3	%	(4)	2.84	27.0	1.96	27.0
Columbia Sportswear	1.05	1.01	3.4686	0.1089	21.7	18.7	17.8	17.6	14.8	18.1	%	0.07	15.0	(0.20)	15.0	
Commerce Bancorp NJ	1.00	0.98	3.2219	0.1012	15.8	15.2	16.4	12.3	11.2	14.2	%	(0.38)	14.5	(0.29)	14.5	
Conway Inc.	0.90	0.89	3.3330	0.1047	8.9	10.5	18.4	24.4	29.3	18.5	%	0.11	15.5	(0.11)	15.5	
Constellation Brands	0.80	0.66	3.5421	0.1113	16.4	11.2	11.3	12.8	12.5	12.8	%	(0.52)	16.5	0.07	16.5	
Corn Products Int'l	0.90	0.82	3.2904	0.1033	7.6	8.3	8.7	7.4	9.3	8.3	%	(1.01)	17.5	0.25	17.5	
Corporate Executive	0.85	0.75	3.5080	0.1102	13.9	18.1	16.4	19.5	24.9	16.6	%	0.12	18.5	0.43	18.5	
Corrections Corp. Amer.	0.80	0.63	3.3849	0.1063	14.5	19.2	7.7	8.0	10.1	11.9	%	(0.62)	14.0	(0.38)	14.0	
Cosco Wholesale	0.85	0.71	3.0071	0.0944	12.3	11.0	11.6	11.1	12.1	11.6	%	(0.85)	12.0	(0.73)	12.0	
Curtiss-Wright	1.00	0.94	2.8063	0.0881	13.9	13.3	17.7	18.1	18.1	16.2	%	(0.14)	14.0	(0.38)	14.0	
Cytex Inds.	0.80	0.69	3.2501	0.1021	10.1	10.9	11.3	11.8	10.6	10.9	%	(0.73)	11.5	(0.82)	11.5	
DaVita Inc.	1.05	1.06	3.0942	0.0972	13.3	12.0	13.2	11.4	10.6	12.1	%	(0.58)	16.0	(0.02)	16.0	
Dalacorp Corp.	0.85	0.75	3.1065	0.0976	210.3	53.2	41.5	24.4	21.3	70.1	%	(4)	5.78	17.5	0.25	17.5
Deere & Co.	1.10	1.11	3.5476	0.1114	9.3	7.9	8.2	5.5	9.1	8.0	%	(1.04)	9.5	(1.18)	9.5	
Del Monte Foods	0.75	0.55	2.9172	0.0916	14.1	16.6	12.6	10.4	10.5	17.7	%	0.02	17.5	0.25	17.5	
Dell Inc.	0.90	0.84	3.3444	0.1060	43.5	42.1	51.2	92.6	88.5	59.6	%	(4)	4.63	31.5	(4)	2.75
Diebold Inc.	0.95	0.87	3.0670	0.0960	16.8	15.2	14.6	11.8	11.2	13.9	%	(0.40)	20.5	0.79	20.5	
Dienex Corp.	0.90	0.84	3.1400	0.0986	21.0	19.7	22.6	24.9	19.3	21.5	%	0.44	24.0	1.41	24.0	
Donaldson Co.	0.90	0.81	2.8322	0.0890	22.7	21.3	19.4	21.1	24.2	21.7	%	0.46	15.5	(0.11)	15.5	
ESCO Technologies	1.00	0.95	3.5629	0.1119	7.1	12.0	112.8	13.2	8.3	30.6	%	1.44	14.0	(0.38)	14.0	
Eastman Chemical	1.00	0.94	3.4143	0.1072	16.1	16.3	15.2	14.8	14.1	15.3	%	(0.24)	13.5	(0.46)	13.5	
Edwards Lifesciences	1.00	0.94	3.0038	0.0943	6.7	7.2	16.5	30.1	20.5	16.2	%	(0.14)	22.0	1.05	22.0	
Energizer Holdings	0.70	0.53	2.8400	0.0892	15.4	15.2	16.8	18.1	17.0	16.5	%	(0.11)	16.0	(0.02)	16.0	
Ethan Allen Interiors	0.80	0.63	3.3041	0.1038	26.4	21.0	45.5	83.2	122.5	55.7	%	(4)	4.20	22.0	1.05	22.0
Famae Mae	1.00	1.00	3.1892	0.1005	16.7	15.5	18.3	18.4	21.2	18.2	%	0.08	15.0	(0.20)	15.0	
GSK Services 'A'	1.10	1.10	2.7920	0.0877	38.5	31.7	12.8	16.0	12.0	22.2	%	0.52	12.5	(0.64)	12.5	
Genivis Group	1.00	0.98	3.5243	0.1107	14.0	11.5	13.2	15.6	18.0	14.5	%	(0.33)	13.5	(0.46)	13.5	
Griffin Corp.	0.90	0.84	3.3231	0.1044	11.6	15.1	16.9	13.5	12.6	13.9	%	(0.40)	13.5	(0.46)	13.5	
HNI Corp.	0.80	0.68	2.8534	0.0899	14.1	13.8	17.1	22.7	24.9	18.5	%	0.11	18.0	0.34	18.0	
Hancock Holding	0.90	0.83	3.0419	0.0855	12.0	12.8	12.5	11.3	15.8	12.9	%	(0.51)	13.0	(0.55)	13.0	

**Utilities Services of South Carolina, Inc.**  
**Comparable Earnings Analysis**  
for a Proxy Group of One Hundred Seventy-Three Non-Utility Companies Comparable to the  
**Proxy Group of Four Value Line (Standard Edition) Water Companies (9)**

Proxy Group of One Hundred Seventy-Three Non-Utility Companies Comparable to the Proxy Group of Four Value Line (Standard Edition) Water Companies (9)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Portfolios' Capital					5-Year Average (2)		5-Year Projected (3)	
					2002	2003	2004	2005	2006	Percent	Student's T-Statistic	Percent	Student's T-Statistic
Harley-Davidson	0.90	0.78	3.2512	0.1021	26.0	25.7	27.6	31.1	37.8	29.6	1.33	26.0	1.77
Harsco's Entertain.	0.90	0.62	2.8778	0.0904	22.9	16.7	16.8	8.4	-10.2	15.4	(0.22)	13.0	(0.55)
Hasbro Inc.	0.95	0.89	2.9060	0.0913	8.9	15.3	13.3	13.8	15.0	13.3	(0.48)	21.0	0.88
Healthcare Rfity Trust	0.80	0.56	2.9743	0.0818	9.0	7.7	5.0	4.1	4.5	6.1	(1.25)	6.5	(1.71)
Home Depot	0.70	0.53	3.5329	0.1110	13.8	14.9	18.8	21.5	21.4	18.1	0.07	17.5	0.25
IDEXX Labs.	0.90	0.76	3.1126	0.0978	11.2	11.1	12.0	15.0	15.3	12.9	(0.51)	20.0	0.70
Imation Corp.	0.90	0.79	3.5117	0.1103	9.3	9.4	5.4	9.6	8.3	8.4	(1.00)	6.5	(1.36)
Intl Game Tech.	0.85	0.71	3.5032	0.1100	20.2	22.2	25.3	22.9	23.2	22.8	0.58	24.5	1.50
Invacare Corp.	1.05	1.04	3.0148	0.0947	7.1	7.9	7.7	8.3	8.3	10.0	(0.82)	9.5	(1.18)
Iron Mountain	1.00	0.97	3.0349	0.0944	16.7	12.9	11.4	11.1	11.4	12.7	(0.53)	11.5	(0.82)
Jones Apparel Group	1.05	1.07	2.9492	0.0926	10.1	10.9	12.4	12.9	16.0	12.5	(0.55)	14.5	(0.29)
Kalwoods Co.	0.85	0.72	3.4702	0.1090	9.2	11.3	9.7	7.5	6.7	8.9	(0.95)	9.0	(1.27)
Kohl's Corp.	0.85	0.71	3.5858	0.1126	18.3	14.1	14.7	14.1	18.8	16.2	(0.14)	17.5	0.25
L-3 Communc. Hldgs	1.00	0.97	3.3681	0.1058	9.6	10.8	10.1	1.3	11.9	8.7	(0.97)	12.5	(0.94)
Lancaster Colony	0.80	0.55	2.9588	0.0920	16.5	18.1	13.4	13.3	15.3	14.9	(0.28)	15.0	(0.20)
Lauder (Estee)	0.85	0.74	3.2772	0.1029	15.8	18.7	21.7	25.6	25.7	21.5	0.44	37.0 (4)	3.73
Luggatt & Platt	1.00	0.95	3.0117	0.0946	11.8	9.7	12.3	12.3	12.5	11.7	(0.64)	14.5	(0.29)
Lilly (Eli)	0.90	0.78	2.9084	0.0913	32.7	28.6	28.1	29.1	31.5	30.0	1.37	25.5	1.68
Lincoln Elec Hldgs	1.05	1.03	2.8254	0.0919	17.2	11.7	14.8	17.4	20.0	16.2 (4)	(0.14)	14.5	(0.28)
Liz Claiborne	0.90	0.81	2.8215	0.0886	118.5	17.7	17.3	15.8	14.5	26.5	2.12	9.5	(1.18)
Low's Cos.	1.00	0.95	3.0459	0.0957	17.7	18.9	19.3	19.7	18.7	18.7	0.13	15.0	(0.20)
Manor Care	0.95	0.91	2.8351	0.0922	13.0	13.6	17.1	20.8	32.4	19.4	0.21	18.0	0.34
Marathon Oil Corp.	1.00	0.97	3.1548	0.0991	11.1	16.7	16.2	26.1	31.7	20.4	0.32	17.5	0.25
Maxco Corp.	1.05	1.00	3.0021	0.0943	14.8	15.7	19.8	18.0	19.8	17.6	0.01	18.0	0.34
Mattal Inc.	0.70	0.52	3.1030	0.0875	24.6	24.9	21.3	23.1	21.6	23.1	0.62	25.0	1.59
Matthews Intl	0.80	0.67	2.9689	0.0932	21.1	17.5	18.0	17.9	16.6	18.2	0.06	14.5	(0.28)
McKesson Corp.	0.95	0.88	3.5059	0.1101	12.6	12.5	12.4	12.5	14.1	12.8	(0.52)	12.0	(0.73)
Millipore Corp.	0.95	0.88	3.1081	0.0976	26.7	16.5	16.5	16.6	16.6	19.8	2.25	21.0	0.88
Murphy Oil Corp.	1.00	0.97	3.5379	0.1111	9.4	13.1	17.8	21.0	14.9	14.6	(0.32)	9.5	(1.18)
New York Community	0.90	0.83	2.7805	0.0873	19.0	18.5	17.2	18.5	17.1	16.1	0.07	15.0	(0.20)
Newell Rubbermaid	0.95	0.87	3.0156	0.0947	20.5	20.2	21.5	25.8	24.9	22.6	0.56	22.0	1.05
Noble Energy	1.00	0.98	3.3280	0.1045	1.7	13.1	22.4	20.4	21.1	15.7	(0.20)	7.0	(1.63)
Nordson Corp.	1.05	1.06	3.3683	0.1068	11.7	11.7	15.8	23.7	22.7	17.1	(0.04)	15.0	(0.20)
Norfolk Southern	1.00	0.99	3.4880	0.1070	7.1	7.6	10.9	12.5	15.4	10.7	(0.78)	12.5	(0.64)
O'Reilly Automotive	0.85	0.85	3.1207	0.0980	12.6	12.8	12.4	13.9	13.1	13.0	(0.49)	13.0	(0.55)
Occidental Petroleum	1.00	0.93	2.9684	0.0901	16.2	20.3	25.4	26.4	22.7	22.2	0.52	13.0	(0.55)
Oshkosh Truck	1.00	0.99	3.5583	0.1117	14.5	14.6	17.7	19.6	19.4	17.2	(0.03)	18.0	0.34
Overseas Shipholding	1.00	0.99	3.3319	0.1046	0.9	13.5	22.7	24.8	19.1	16.2	(0.14)	12.0	(0.73)
Owens & Minor	0.95	0.87	3.1281	0.0982	18.1	13.1	13.1	13.0	10.2	13.5	(0.44)	14.0	(0.38)
Pacific Cap. Bancorp	0.80	0.82	3.2674	0.1026	20.2	19.0	19.1	18.2	15.3	18.4	0.10	7.0	(1.83)
Pactiv Corp.	1.00	0.93	2.9353	0.0922	24.5	21.7	19.7	17.7	26.8	22.1	0.51	18.0	0.34
Pall Corp.	1.00	0.96	2.8764	0.0903	8.9	15.4	14.4	12.4	12.3	12.7	(0.53)	14.5	(0.29)
Papa John's Intl	0.75	0.62	3.1117	0.0977	38.4	23.0	28.0	25.7	32.0	29.4	1.31	23.5	1.32
Penn Virginia Res.	0.75	0.58	3.0425	0.0956	15.2	14.8	22.9	23.0	21.2	19.4	0.21	18.0	0.34
Penn. R.E.I.T.	0.80	0.65	2.8592	0.0887	12.6	2.8	4.8	5.1	3.2	5.7	(1.30)	6.5	(1.71)
Pentair Inc.	1.05	1.03	3.4951	0.1096	11.7	11.4	9.5	11.9	11.0	11.1	(0.70)	13.5	(0.46)
Pepsi Bottling Group	0.80	0.68	3.4317	0.1078	23.5	22.4	23.4	22.8	25.0	23.4	0.65	25.5	1.68
Perrigo Co.	0.90	0.82	3.5332	0.1110	10.7	11.6	112.8	6.4	11.6	30.6	1.44	13.0	(0.55)
Pfizer Inc.	0.90	0.77	2.8296	0.0889	47.9	19.5	23.6	22.9	21.0	27.0	1.04	18.0	0.52
Phillips-Van Heusen	1.00	0.97	3.3992	0.1068	11.2	17.1	19.4	18.3	15.8	16.4	(0.12)	12.5	(0.64)
Pogo Producing	1.05	1.03	3.5596	0.1118	9.9	20.3	15.1	13.8	5.4	12.9	(0.51)	7.9	(1.54)
Polo Ralph Lauren 'A'	1.00	0.98	3.5150	0.1104	15.2	13.0	15.3	15.0	15.0	14.7	(0.31)	11.5	(0.82)
Pool Corp.	0.85	0.70	3.3882	0.1064	29.1	26.0	30.4	30.5	34.2	30.1	1.38	31.0 (4)	2.86
Quaker Chemical	1.00	0.95	3.8102	0.1134	16.2	13.2	7.6	6.4	8.7	10.6	(0.76)	14.5	(0.29)
Quest Diagnostics	0.85	0.72	3.3321	0.1047	18.1	16.2	22.2	19.8	21.2	19.9	0.26	19.5	0.61
RARE Hospitality	0.95	0.91	3.3702	0.1059	11.6	12.0	12.2	12.5	14.9	12.7	(0.53)	12.5	(0.64)
RLI Corp.	0.85	0.71	2.8032	0.0880	8.4	10.6	10.3	14.0	14.5	11.6	(0.68)	12.5	(0.64)
RPM Intl	0.85	0.87	3.0945	0.0972	11.8	14.1	14.5	14.7	18.2	14.7	(0.31)	16.0	0.34
Regal-Beloit	1.10	1.11	3.0218	0.0949	8.4	8.3	5.7	10.7	14.8	8.7	(0.97)	12.5	(0.64)
Regis Corp.	0.90	0.80	3.0946	0.0972	15.8	15.4	15.3	13.6	11.7	14.4	(0.34)	11.0	(0.91)
ResMed Inc.	0.80	0.69	3.5506	0.1128	19.4	16.0	15.8	13.7	12.5	16.5	(0.22)	14.8	(0.28)
Responnics Inc.	0.90	0.77	3.2990	0.1036	11.5	13.5	13.6	14.1	13.1	13.2	(0.47)	13.5	(0.46)
Reper Inds.	1.10	1.08	2.9588	0.0930	18.3	9.8	8.4	12.0	13.1	12.3	(0.97)	11.5	(0.82)
Ruby Tuesday	0.80	0.83	3.4584	0.1086	22.7	21.3	20.8	18.2	19.2	20.5	0.33	18.0	0.52
Ruddick Corp.	0.85	0.75	2.7792	0.0873	12.3	12.1	11.8	11.3	10.8	11.7	(0.64)	12.5	(0.54)
SJM Corporation	0.70	0.53	3.1371	0.0865	53.4	61.7	36.5	26.5	26.5	43.5 (4)	2.86	25.5	1.68
SUPERVALU INC.	1.00	0.93	3.2994	0.1036	12.8	13.1	13.3	12.3	8.5	12.0	(0.60)	11.5	(0.82)
Solvent (Henry)	0.75	0.60	3.3673	0.1058	13.7	13.9	12.3	12.4	12.4	13.1	(0.48)	16.0	(0.02)
Scotts Miracle-Gro	1.00	0.99	3.0178	0.0948	17.0	14.3	11.5	8.8	12.3	13.0	(0.49)	22.0	1.05
Sensient Techn.	0.85	0.85	2.9419	0.0924	16.2	13.4	11.5	9.1	8.4	11.9	(0.82)	11.0	(0.91)
ServiceMaster Co.	0.90	0.80	2.8021	0.0880	14.0	19.4	17.4	17.1	17.1	17.0	(0.06)	32.0 (4)	2.84
Smithfield Foods	0.85	0.88	3.1808	0.0999	12.0	10.1	15.7	9.4	8.5	9.1	(0.92)	10.0	(1.09)
Sone Corp.	0.75	0.56	3.3634	0.1056	20.7	19.7	18.8	19.6	20.1	19.8	0.25	26.0	1.77
St. Joe Corp.	0.80	0.83	3.0521	0.0959	31.5	15.6	17.2	24.6	10.5	19.9	0.28	28.5	2.21
Standex Intl	1.00	0.97	3.3891	0.1064	11.4	11.1	13.5	14.4	10.5	12.2	(0.58)	15.0	(0.20)

### Comparable Earnings Analysis

Proxy Group of Four Value Line (Standard Edition) Water Companies (R)

Average for the Proxy Group of Four Value Line (Standard Edition) Water Companies	<u>0.90</u>	<u>0.61</u>	<u>3.1940 (10)</u>	<u>0.1003</u>
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16.0% 15.5%

15.8% (6)

14.3% 14.1%

14.2% (B)

14.2% (B)

Utilities Services of South Carolina, Inc.  
Comparable Earnings Analysis

E Estimated

Notes: (1) The criteria for selection of the proxy group of one hundred forty-two non-utility companies was that the non-utility companies be domestic and have a meaningful rate of return on book common equity, shareholders' equity, net worth, or partners' capital for each of the five years ended 2006 or projected 2010 - 2012 as reported in Value Line Investment Survey (Standard Edition). The proxy group of one hundred forty-two non-utility companies was selected based upon the proxy group of eight AUS Utility Reports water companies' unadjusted beta range of 0.37 - 0.97 and standard error of the regression range of 2.8023 - 3.6531. These ranges are based upon plus or minus three standard deviations of the unadjusted beta and standard error of the regression as detailed in Ms. Ahern's direct testimony. Plus or minus three standard deviations captures 99.73% of the distribution of unadjusted betas and standard errors of the regression.

(2) Ending 2006.

(3) 2010 - 2012.

(4) The Student's T-statistic associated with these returns exceeds 1.96 at the 95% level of confidence. Therefore, they have been excluded, as outliers, to arrive at proper mean historical and projected returns as fully explained in Ms. Ahern's testimony.

(5) The standard deviation of group of eight AUS Utility Reports water companies' standard error of the regression is 0.1418. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus, } 0.1418 = \frac{3.2277}{\sqrt{518}} = \frac{3.2277}{22.7596}$$

(6) Mid-point of the arithmetic mean of the historical five year average and five year projected rate of return on book common equity, shareholder's equity, net worth, or partners' capital.

(7) Arithmetic mean of historical five year rates of return and five year projected rates of return on net worth, common equity or partners' capital excluding those 20% and greater as well as those 8.2% or less, i.e., 200 basis points above the prospective yield of 6.2% on A rated Moody's public utility bonds (from page 1 of Schedule PMA-10.)

(8) Mid-point of the arithmetic mean of historical five year rates of return and five year projected rates of return on net worth, common equity or partners' capital excluding those 20% and greater as well as those 8.6% or less, i.e., 200 basis points above the prospective yield of 6.6% on A rated Moody's public utility bonds (from page 1 of Schedule PMA-10.)

(9) The criteria for selection of the proxy group of one hundred sixty-five non-utility companies was that the non-utility companies be domestic and have a meaningful rate of return on book common equity, net worth, or partners' capital for each of the five years ended 2006 or projected 2010 - 2012 as reported in Value Line Investment Survey (Standard Edition). The proxy group of one hundred sixty-five non-utility companies was selected based upon the

Utilities Services of South Carolina, Inc.  
Comparable Earnings Analysis

proxy group of four Value Line (Standard Edition) water companies' unadjusted beta range of 0.51 – 1.11 and standard error of the regression range of 2.7731– 3.6149. These ranges are based upon plus or minus three standard deviations of the unadjusted beta and standard error of the regression as detailed in Ms. Ahern's direct testimony. Plus or minus three standard deviations captures 99.73% of the distribution of unadjusted betas and standard errors of the regression.

- (10) The standard deviation of the proxy group of four Value Line (Standard Edition) water companies' standard error of the regression is 0.1403 (3.1940 / 22.7596).

Source of Information: Value Line, Inc., June 15, 2007  
Value Line Investment Survey (Standard Edition)



Utilities Services of South Carolina, Inc.  
Authorized Returns on Common Equity and  
Common Equity Ratios for Electric and Gas Distribution Companies  
for the Twelve Months Ended June 2007

Date	Company	Type of Utility	State	Authorized Return on Common Equity	Authorized Common Equity Ratio	Moody's A Rated Public Utility Bond Yields (1)	Spread
6-Jul-06	Maine Public Service	Electric	ME	10.20 %	50.00 % (2)(6)	6.42 %	3.78 %
24-Jul-06	Central Hudson Gas & Electric	Electric	NY	9.60	45.00 (2)(4)(7)	6.40	3.20
24-Jul-06	Central Hudson Gas & Electric	Gas	NY	9.60	45.00 (2)(6)(7)	6.40	3.20
26-Jul-06	AEP West Virginia	Electric	WV	10.50	-- (2)(7)	6.40	4.10
28-Jul-06	Commonwealth Edison	Electric	IL	10.05	42.86 (7)(9)	6.40	3.65
23-Aug-06	New York State Electric & Gas	Electric	NY	9.55	41.60 (7)	6.37	3.18
1-Sep-06	Northern States Power	Electric	MN	10.54	51.67 (3)(9)	6.37	4.17
14-Sep-06	PacifiCorp	Electric	OR	10.00	50.00 (2)(9)	6.37	3.63
20-Sep-06	Kinder Morgan	Gas	WV	11.00	43.56 (2)(9)	6.37	4.63
26-Sep-06	Chesapeake Utilities	Gas	MD	10.75	53.00 (2)	6.20	4.55
6-Oct-06	Unitil Energy Systems	Electric	NH	9.67	43.10 (2)(4)(7)	6.20	3.47
20-Oct-06	Orange & Rockland Utilities	Gas	NY	9.80	48.00 (2)(4)(6)	6.20	3.60
2-Nov-06	CenterPoint Energy Minnesota Gas	Gas	MN	9.71	46.14 (3)	6.00	3.71
9-Nov-06	Public Service Electric & Gas	Gas	NJ	10.00	47.40 (2)	6.00	4.00
21-Nov-06	Central Illinois Light	Electric	IL	10.12	45.57 (7)	5.98	4.14
21-Nov-06	Central Illinois Public Service	Electric	IL	10.08	48.92 (7)	5.98	4.10
21-Nov-06	Illinois Power	Electric	IL	10.08	51.56 (7)	5.98	4.10
21-Nov-06	Consumers Energy	Gas	MI	11.00	35.06 * (3)	5.98	5.02
1-Dec-06	PacifiCorp	Electric	UT	10.25	-- (2)(4)	5.98	4.27
1-Dec-06	Public Service of Colorado	Electric	CO	10.50	60.00 (2)	5.98	4.52
7-Dec-06	Central Vermont Public Service	Electric	VT	10.75	55.57 (2)	5.98	4.77
21-Dec-06	Empire District Electric	Electric	MO	10.90	49.74	5.80	5.10
21-Dec-06	Kansas City Power & Light	Electric	MO	11.25	53.69	5.80	5.45
22-Dec-06	Green Mountain Power	Electric	VT	10.25	52.76 (2)	5.80	4.45
5-Jan-07	OGE Electric Service	Electric	AR	10.00	32.33 * (2)	5.80	4.20
5-Jan-07	Puget Sound Energy	Electric	WA	10.40	44.00	5.80	4.60
5-Jan-07	Puget Sound Energy	Gas	WA	10.40	44.00	5.80	4.60
9-Jan-07	SEMCO Energy Gas	Gas	MI	11.00	42.94 * (2)	5.80	5.20
11-Jan-07	Metropolitan Edison	Electric	PA	10.10	49.00 (7)	5.80	4.30
11-Jan-07	Pennsylvania Electric	Electric	PA	10.10	49.00 (7)	5.80	4.30
11-Jan-07	Wisconsin Public Service	Electric	WI	10.90	57.46	5.80	5.10
11-Jan-07	Wisconsin Public Service	Gas	WI	10.90	57.46	5.80	5.10
12-Jan-07	Portland General Electric	Electric	OR	10.10	50.00 (5)	5.80	4.30
19-Jan-07	Wisconsin Power and Light	Electric	WI	10.80	54.13	5.80	5.00
19-Jan-07	Wisconsin Power and Light	Gas	WI	10.80	54.13	5.80	5.00
26-Jan-07	Fitchburg Gas & Electric	Gas	MA	10.00	-- (2)(4)	5.81	4.19
8-Feb-07	FPL Gas	Gas	PA	10.40	51.79 (5)	5.81	4.59
14-Mar-07	Connecticut Natural Gas	Gas	CT	10.10	53.60 (2)	5.96	4.14
20-Mar-07	Delmarva Power & Light	Gas	DE	10.25	46.90 (2)(3)	5.96	4.29
22-Mar-07	Rockland Electric	Electric	NJ	9.97	46.50 (2)(6)	5.90	4.07
22-Mar-07	Southern Union	Gas	MO	10.50	36.06	5.90	4.60
29-Mar-07	Almos Energy	Gas	TX	10.00	47.80 (5)	5.90	4.10
15-May-07	Appalachian Power	Electric	VA	10.00	41.11 *	5.85	4.15
17-May-07	Aquila Networks-MPS	Electric	MO	10.25	48.17	5.85	4.40
17-May-07	Aquila Networks-L&P	Electric	MO	10.25	48.17	5.85	4.40
22-May-07	Monongahela Pow/Polomac Ed	Electric	WV	10.50	46.07	5.97	4.53
22-May-07	Union Electric	Electric	MO	10.20	52.22	5.97	4.23
23-May-07	Nevada Power	Electric	NV	10.70	47.29	5.97	4.73
25-May-07	Public Service of New Hampshire	Electric	NH	9.67	47.66 (2)(6)	5.97	3.70
5-Jun-07	Cascade Natural Gas	Gas	OR	10.10	45.00 (2)	5.97	4.13
13-Jun-07	Northern States Power	Gas	ND	10.75	51.69 (2)	5.97	4.78
15-Jun-07	Entergy Arkansas	Electric	AR	9.90	32.19 *	5.97	3.93
18-Jun-07	Public Service of Colorado	Gas	CO	10.25	60.17 (2)	5.97	4.28
22-Jun-07	Appalachian Pow/Wheeling Pow	Electric	WV	10.50	42.88 (2)(11)	5.99	4.51
28-Jun-07	Arizona Public Service	Electric	AZ	10.75	54.50	5.99	4.76
29-Jun-07	Yankee Gas Services	Gas	CT	10.10	50.30 (2)	5.99	4.11
29-Jun-07	Public Service of New Mexico	Gas	NM	9.53	48.00	5.99	3.54
Average - All Cases				10.29 %	48.01 %	5.99 %	4.29 %
Average - Litigated Cases				10.35 %	47.72 %	5.93 %	4.42 %

Prospective Yield on A Rated Public Utility Bonds

6.60

Average Spread between Authorized Returns on  
Common Equity and the yield on 10-year U S  
Treasury Notes for Litigated Cases

4.42

Indicated Common Equity Cost Rate

11.02

- Notes: (1) Actual A rated yield represents the yield of the previous month if the order was issued on or after the 21st of each month, or the yield of two months prior if the order was issued on or before the 20th of each month. For example, the yield for 7/17/07 is the A rated Public Utility yield for July 2007 and the yield for 7/26/07 is the A rated Public Utility yield for August 2007
- (2) Order followed full or partial stipulation settlement by the parties. Decision particulars not necessarily precedent- setting or specifically
- (3) Interim rate implemented prior to the issuance of final order, normally under bond and subject to refund
- (4) Rate change to be implemented in multiple steps
- (5) Hypothetical
- (6) Rate change applicable to electric distribution rates only
- (7) Rate change applicable to electric transmission and distribution rates only.
- (9) Indicated rate increase to be phased-in over four years, with a 6.88% ROR authorized for 2006, 6.89% for 2007, 7.09% for 2008, and 7.48% for 2009
- (9) Rate increase declined to \$114.9 million effective 1/1/07
- (10) From page 1 of Schedule PMA-10
- (11) Return implicit in settlement

\* Capital structure includes cost-free items or tax credit balances at the overall rate of return

Source of Information:  
Major Rate Case Decisions - January 2005 - December 2006, Published by Regulatory Research Associates, Inc., An SNL Energy Company  
Regulatory Focus - Regulatory Study, Major Rate Case Decisions - January-June 2007, July 3 2007, Published by Regulatory Research Associates, Inc., An SNL Energy Company  
Mergent Bond Record Monthly Update, June 2007, Vol. 74, No. 6